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ORIGINAL LECTURES.

THE METHODS TO BE PURSUED IN THE EXAMINATION OF PATIENTS SUFFERING WITH ABDOMINAL GROWTHS.

A Clinical Lecture delivered at the Jefferson Medical College Hospital.

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(Reported by W. H. Morrison, M.D.)

GENTLEMEN: The presence of this patient to-day affords me the opportunity of speaking to you with regard to the methods to be pursued in the examination of patients suffering from abdominal growths. Having first obtained the history, the patient is to be prepared for the examination by adopting a dress which would be suitable to be worn in bed. This implies the removal of all constriction from the waist and a perfect freedom of exposure of the surface of the abdomen. Having the patient prepared in this way and placed on her back on the table, the first step in the examination is inspection.

Inspection: The surface of the abdomen is inspected in order to ascertain whether it is uniform in shape. Its contour is observed and any enlargements or projections are to be noted. In practising inspection we should note not only any irregularities of the surface, but also the condition of the integument and any marks which may be found in the integument. For instance, your attention is called to a line which frequently exists between the umbilicus and the pubes. Formerly this line, which has a brownish color, was regarded as diagnostic of pregnancy, it being usually found, or almost as a rule, in women who are pregnant. This line is also observed in the patient before you and I have seen it in a number of cases of abdominal tumors. It is, therefore, not pathognomonic of pregnancy, but it also exists in other cases of enlargement of the abdomen. This line is due to a pigmentary deposit, and, so far as I can recollect, I have never seen any satisfactory explanation why it should exist. In a recent case of ovariotomy not only did this line exist prominently between the umbilicus and the pubes, but brownish spots were also found on different parts of the body, face, chest, and right side of the surface of the abdomen and on the lower extremities. In this case the patient stated that the brown line and spots appeared after the development of the growth. Further, after pregnancy to full term has occurred, the surface of the abdomen may be marked by cicatrices, which indicate undue stretching of the integument. I call attention to this point, since it has happened in cases which have been presented at the clinic, that pregnancy has occurred in unmarried females and the history of the case has been entirely opposed to any such condition.

Having learned all that we can from inspection, the next step in the examination is palpation.

Palpation: By palpation we mean pressure with one, two, or three fingers upon the abdomen, carrying this, if necessary, to some depth. In order to facilitate this manipulation, it is desirable that the patient should be directed to inspire and then make a forcible expiration. By this means the diaphragm is drawn up and the walls of the abdomen are relaxed and deep palpation can then be made. By means of palpation we ascertain whether the cavity of the abdomen or the cavity of the pelvis is occupied by a growth, and, further, whether the growth is hard, soft, or elastic.

Percussion: The next step is to percuss the abdomen. Percussion is familiar to you all as one of the methods employed in the examination of the thoracic cavity. Beginning in the median line, we percuss downward from the ensiform cartilage to the umbilicus and from the umbilicus to the pubes. The patient is then turned on her left side and percussion made over the right side of the abdomen and the right lumbar region. She is afterwards turned on the right side and the left side percussed in a similar way. Percussion gives us an idea in regard to the character of any growth in the cavity of the abdomen. The percussion note obtained over the intestine is resonant, or even more than resonant, tympanitic in character. Over a solid tumor the percussion note would be dull or flat. Over a cyst containing fluid it would also be flat or dull. By percussion, therefore, we determine whether the abdominal cavity contains anything more than the intestines, which emit a resonant or tympanitic sound on percussion, and the extent to which the growth occupies the cavity.

Auscultation: Auscultation is also to be employed in the examination of abdominal growths. In carrying out this procedure it is necessary to apply the ear to different parts of the surface of the abdomen. If there is any reason to suspect pregnancy, the ear should be first applied over the left side of the abdomen, midway between the umbilicus and the middle of Poupart's ligament. At this point the fœtal heart sounds can usually be heard, if the embryo occupies what is considered its normal position, that is, with the vertex to the left. Auscultation also enables us to determine whether or not the swelling which is present is due to to aneurism, for by this means the presence of the aneurismal bruit can be determined.

The effort to elicit *fluctuation* is the next step in the examination. By this is meant the production of a wave through the mass of fluid when the walls of the abdomen are struck or percussed. If one hand is placed on one side of the abdomen, and the other side is percussed with one or two fingers of the other hand, the movement of the fluid is felt distinctly. This wave differs much in amplitude according to the density of the fluid and also according to the character of the cyst in which it may be contained. If the fluid is thin and limpid, the wave is long; if the fluid is very dense and viscid, the

wave is short. The ability to determine these differences is acquired largely by experience. I simply give you here general statements in regard to the differences in the fluctuation wave in fluids of different density. Fluctuation also enables us to a certain extent to determine whether the fluid is contained within a cyst or in the general peritoneal cavity. This also requires some experience in order to insure accuracy. Fluid in the general peritoneal cavity gives in fluctuation a wave which pervades the entire cavity, and this can be felt by placing the hand on different parts of the surface. When, on the other hand, there is even a thin cyst wall it is sometimes possible to distinguish the limit of the wave movement. Fluctuation can also be developed by introducing a finger into the vagina, and if the cyst occupies the pelvic cavity, fluctuation can be obtained by percussing the abdominal wall and feeling the wave with the finger in the cavity of the vagina.

I desire also to call your attention to a wave-like movement which is sometimes obtained on percussing the abdomen, and which is known as the fat wave. This wave is found in patients with very fat abdominal walls, this fat being loosely held in the meshes of the fascia. It is important that this be borne in mind, for errors in diagnosis have been made by the confusion of this wave with that of fluctuation.

We have so far examined the abdominal surface. It has been examined with the eye so as to determine its contour and outline. It has also been examined by palpation and percussion. The ear has been placed on the surface and auscultation has been performed. The effort has also been made to determine whether the fluid is contained within the peritoneal cavity or in a cyst in the cavity. This has been done by eliciting the fluctuation wave.

I might say, in addition, that it is desirable to employ mensuration—that is, measuring the enlargement. This can be done by a tape-measure passed around the abdomen at the level of the umbilicus. Then, at the point of the ensiform cartilage, also at the point of greatest enlargement, which is usually below the umbilicus, and a measurement may also be taken just above the pubes. In this way the circumference at these various points can be ascertained and recorded. It is also important to note the distance from the ensiform cartilage to the umbilicus and from the umbilicus to the pubes. If it is necessary to examine the patient from time to time, these measurements can be repeated in order to determine the variation in size.

Having completed the external examination, we are now prepared to make a vaginal examination. I take the opportunity of saying at this point that no one would be justified in undertaking abdominal incision without completing any examination which has been made by a vaginal examination. I can recall at this moment one case in which this step was neglected and the abdominal cavity was opened and a pregnant uterus found. A vaginal examination in this case would undoubtedly have revealed the existence of pregnancy, and the patient would have been saved the rather dangerous operation of abdominal incision. For the purpose of a vaginal examination the patient should lie on her back and should afterwards be changed to the side. The finger, well anointed, should be passed into the vagina and at once seek the cervix. Having examined the cervix, the finger should be swept around the neck, and as it is withdrawn palpation should be made anteriorly, laterally, and posteriorly. Then bimanual examination should be practised, with the finger of the right hand in the vagina, pressure being made over the surface of the abdomen with the left hand. In this way information can be obtained in regard to the connection of the growth with the uterus. Other points of information which can be obtained in this way are the following: A cystic tumor occupying the pelvic cavity can be felt through the vaginal wall. A solid tumor can be felt in the same way. So with the finger introduced into the vagina, the occupation of the pelvic cavity can be determined through the vaginal walls. As I have already stated, fluctuation can be obtained with the finger in the vagina, percussion being made on the surface of the abdomen with the other hand.

It is also necessary to introduce the sound into the uterine cavity in order to determine the condition of the uterine canal. It is desirable that beginners in performing this operation should use the speculum. After years of experience, one may be enabled readily to introduce the sound without danger into the cavity of the womb without a speculum, the finger of one hand being introduced into the vagina and placed on the cervix and the sound being carried along this as a guide. There are so many dangers, however, which present themselves in the introduction of the sound in cases of uterine tumors, and, indeed, even of other tumors connected with the uterus, that it is desirable to use the greatest care in the introduction of the sound into the canal. It should not be forced, but the way should be felt. It frequently happens that there are displacements of the uterus by reason of the pressure of the growth, whether this be solid or cystic in character. With regard to the presence of cystic growths, the information obtained by passing the sound into the uterus relates rather to the mobility of the uterus and to the fact of its being drawn up from the cavity of the pelvis or forced down into the cavity. On the one hand, we may assert with reasonable accuracy that adhesions exist if the uterus is found to be drawn up into the cavity of the pelvis and held in a fixed position; and on the other hand, we may infer that the cyst is impacted in the cavity of the pelvis, if the uterus is in a state of flexion, either antero or retro, and is immovable in its position. In fibroid growths, especially of the submucous and mural varieties, the uterine canal is notably elongated, and the sound introduced into the uterus will give very valuable information as to the seat of the fibroid tumor.

With the speculum we can ascertain the color of the mucous membrane of the vagina and the color of that covering the cervix. This is regarded as a matter of importance, as in the pregnant female the color is of a purplish hue, which is thought to be diagnostic. Another point to be ascertained with the finger in the vagina is the condition of the cervix, as to softness or hardness.

In addition to the examination by the vagina, it is sometimes desirable to make an examination by the rectum. By this means the existence of growths which cannot be readily reached in the vagina can be determined. It is, of course, necessary that an enema should have been administered beforehand in order to unload the lower bowel.

It is also well to complete the examination by the introduction of the sound into the cavity of the bladder. With this instrument in the bladder, and the finger in the rectum, bimanual manipulation can be made which will assist in the detection of tumors occupying the pelvic cavity.

In order to illustrate the points to which I have alluded, I shall next examine the patient now upon the table. She has been prepared by the removal of all unnecessary clothing and of all constrictions around the waist. The abdomen is exposed, and on inspection we observe that it is irregular. In the median line there is a projection, and on the right side there is another. The observance of two irregular points upon the surface gives us certain information in regard to the nature of the growth which occupies the cavity of the abdomen. It excludes certain conditions. For instance, pregnancy. In pregnancy there is a uniform enlargement of the abdomen, and the surface is not irregular as in the present instance. Inspection does not enable us to say whether these irregularities are due to pedunculated fibroid tumors or to exogenous cysts forming part of an ovarian cyst, but it does enable us to say that this is not a case of pregnancy and not a case of simple cyst.

Palpation is the next method to be employed. By making pressure with two or three of the fingers over different parts of the swelling, I can easily feel beneath the abdominal wall a hard, resisting mass which is not elastic. This would seem to indicate that the growth is solid and not cystic. Palpation elicits the same sensation over all parts of the growth. We cannot say positively from this examination that this is not a very dense multilocular cyst. You may be able, after much experience, to determine very slight shades of difference in the elasticity, which can be obtained even in cases of dense multilocular cysts. So far as I can ascertain from palpation, I am inclined to believe that we are dealing with a solid tumor and not a cyst. Not only do the fingers determine the presence of a hard, unyielding mass, but those projections which were noticed on inspection can be further outlined. Slightly to the right of the median line is a large mass which appears to be attached to the uterus by a broad pedicle. On the left is another mass, and below the tumor on the right there is a small mass which seems to be somewhat movable. This would seem to indicate that these growths are fibroid tumors which are attached to the body of the uterus by either broad and short or narrow longer pedicles. In the former case being called sessile and in the latter pedunculated or pedicalated growths.

You will observe that the brownish line reaching from the umbilicus to the pubes, which has been referred to, is present in this case.

Next, I shall practise percussion. Beginning at the ensiform cartilage, and percussing in the median line, there is, as you observe, resonance down to this point, about two and a half inches above the umbilicus. Here the sound suddenly changes into that of dulness or flatness. As I pass downward in the median line, the same flat sound is elicited below the umbilicus. As I pass on either side of the median line from the point before mentioned, the dulness is found to exist there also. The patient is next turned on the left side, and percussion performed over the right lumbar region and lateral side of the abdominal cavity. At this point we find the dulness which belongs to the liver, and as we pass downwards we reach the resonance belonging to the ascending colon. Turning the patient now upon the right side and percussing over the left side, we find in the posterior part of the lumbar region, the resonance depending on the presence of the descending colon. As we come toward the median line, the sound becomes dull or flat, showing that this mass projects more into the left side than into the right side of the abdominal cavity.

Testing for fluctuation, I find it impossible to obtain any wave. We can therefore say that there is no fluid, either in the abdominal cavity proper or in any cyst contained in the abdominal cavity.

Continuing the examination, I place my ear over the abdomen at the point which I have before mentioned. I am, however, unable to hear any sound which may be regarded as indicating the presence of a fœtus in the uterus or any aneurismal bruit which would be found in dilatation of the aorta. Auscultation, therefore, gives altogether negative signs in this case.

Examination per vaginam shows that the uterus is small. The cervix is slightly elongated and that of a woman who has never been pregnant. The uterus is fixed and immovable in a position of marked retroflexion. Palpation through the vaginal walls reveals the presence of hard, unyielding masses. These, so far as can be ascertained, are attached to the body of the uterus. Owing to the displacement of the uterus, it is impossible to introduce the sound completely. It simply passes into the cervix, but not beyond the internal os.

Rectal examination has not been made, nor has any examination by the bladder been made, as the symptoms were sufficiently prominent and characteristic to enable us to arrive at a conclusion without employing this manipulation. In any case of doubt, however, it is necessary that examination by the rectum and bladder should be made as before stated.

Having passed in a systematic manner through the different steps of the examination, we are enabled to arrive at a conclusion in regard to the nature of this growth. In other words, we are prepared to make the diagnosis. From what I have seen, and from what I have felt, I am prepared to say that we have here fibroid tumors which are of the subperitoneal form. Whether the uterus itself is involved to any great extent cannot be positively determined, owing to the impossibility of introducing the sound. It is, however, quite possible that in addition to the subperitoneal form of fibroid tumors there is also the mural form or that in which the body of the uterus is affected.

Before passing to the question of treatment, I would say that there are three varieties of fibroid growths, or if you choose to call them so, of fibro-myoma or fibro-myomatous growths. These varieties are the subperitoneal, in which the tumors lie beneath the peritoneum; the interstitial or mural, in which the tumors are located in the substance of the uterus itself, and the submucous, in which the tumors are situated beneath the mucous membrane of the uterine canal. In the subperitoneal variety the tumors project from the surface of the uterus, being covered with a layer of peritoneum and sometimes attached to the body of the organ by a broad and short pedicle, in which case, as I have said, they are called ses-

sile growths, or by narrow and long pedicles, in which case they are called pedunculated growths. In those cases in which the pedicle is small and long, the mass can be readily moved about the cavity of the abdomen. Not only so, but it falls about if no adhesions exist, as the patient changes her position from side to side or rises from the recumbent to the erect position. In the case of mural tumors, which, as already stated, occupy the substance of the uterus, the organ is uniformly enlarged. Where they exist without the presence of subperitoneal or submucous tumors, the uterus is uniformly enlarged, as is found in pregnancy. In the submucous variety the growths form beneath the mucous membrane and project into the cavity of the uterus. Sometimes they get into the canal, and the contraction of the muscular fibres forces them on down until they escape from the cervix, forming what are known as polypi, the pedicle being in these cases elongated so as to permit the growth to pass into the cavity of the vagina. Frequently these submucous fibroid tumors are very large, and they do not pass into the canal and become pedicalated, but distend the cavity of the uterus and change the direction of the canal.

The symptoms in the submucous and mural varieties of fibroid tumors are largely connected with the menstrual flow, and they relate to an increase of the flow. I have had some patients who lost enormous amounts of blood at these periods. This is a prominent symptom, and should always lead to a suspicion of this form of growth. Hemorrhage at the menstrual period is not so marked in the mural as in the submucous variety. This symptom may be entirely absent in the subperitoneal variety of fibroid tumors.

I next come to the question of treatment. At the present day, various methods of treatment are practised. In the first place with regard to medication. Mural and submucous growths are amenable to treatment by means of such remedies as ergot, which, by contracting the bloodvessels of the organ, diminish the nutrition, and in that way limit the growth of the tumor. There has been sufficient experience obtained in the use of ergot and its preparations to warrant the conclusion that these forms of growth can be positively limited. Whether or not they can be ultimately removed, is still a question, but their growth can be checked. Ergot is not of as much value in the subperitoneal variety, especially in the pedunculated form, where the pedicle is long and narrow. It may be of some service where the pedicle is broad, as in the sessile growths, and where the effect of the remedy can reach the bloodvessels of the attached mass. The muriate of ammonium was employed by the late Dr. W. L. Atlee, who regarded it of value in the treatment of fibroid growths of the uterus.

After these remedies, operative interference may be employed, but there are two very important questions or conditions to be considered before any operation is to be decided upon. In the case of fibroid growths in which the menstrual flow is so great as to drain away the life of the patient, it may be justifiable to interfere with the knife. There is also another condition which would warrant operative measures, and that is the enormous size of the mass, making it a burden to the patient too great to bear.

In regard to operative interferences, the menopause can be anticipated by the removal of the ovaries. If any operation is to be performed, the removal of the ovaries, which is much less dangerous than extirpation of the uterus, is the one to be adopted. There are to my mind very grave objections to the performance of operations for the removal of fibroid masses which involve the body of the uterus or which are attached by very broad pedicles to it, and which are adherent to the viscera or abdominal wall.

A patient with a uterine fibroid can enjoy life and the growth can exist indefinitely without interfering with health. I have at this time under my care a number of patients suffering with fibroid tumors in whom I have practised the hypodermic injection of ergotine, or the aqueous extract of ergot, for a number of years. In one of these cases, I have used ergotine for the past eight years. Measurement of the abdominal enlargement in this case shows that the growth has not increased. It has, on the other hand, not markedly decreased. The patient does not loose much blood during her menstrual period, and is not rendered uncomfortable by the presence of the tumor. She is able to take part in all the enjoyments of her home, to ride out in her carriage, and to enjoy the company of her friends. I am quite sure that if I were to interfere in this case with a surgical procedure, I should terminate the life of my patient. In another case, in which I used ergot for three years, a most desirable result was obtained. In this instance, the growth was of the submucous variety. After the lapse of nearly three years, I observed that the mass was softening; and on palpation and percussion, fluctuation could be distinctly obtained. I also examined the mass from the cavity of the uterus, and found that there, too, it was softened, and fluctuation could be obtained. I therefore determined to incise the wall of the canal, which I did, and a mass of offensive fluid escaped, containing broken-down débris of muscular and fibrous tissues. My patient suffered greatly from pyæmic symptoms, and was very ill for a number of days; but by the vigorous use of antiseptic methods, washing out the cavity with antiseptic agents, as the solution of carbolic acid, surrounding her with the best hygienic conditions, and by the employment of tonics and stimulants, I was able to carry her through this critical period occupied by the evacuation of this large cavity formed by the breaking down of the tumor. Other instances of this kind have been recorded in which the effect of ergot has been markedly seen. I can only explain this transformation of the solid growth to the fluid or semi-fluid condition by the cutting off of the nutrition of the growth, and the production of positive gangrene.

There are instances on record in which incision of the lining membrane of the canal has been made and ergot afterward given. In this way, submucous fibroid tumors have been delivered. When the delivery has not been complete, the surgeon has interfered, and has removed the mass by cutting away portions of it at different times. This operation is attended with many dangers. Some of these dangers result from septic infection and shock. There is also the danger of the occurrence of hemorrhage.

From the examination of the case before you, the treatment which I should adopt, would be the long-continued use of hypodermic injections of ergotine, and this failing, the performance of oöphorectomy. I may

say, in regard to the hypodermic injection of this remedy, that the injections should be made in the abdominal wall; and in order to avoid the occurrence of abscess, it has been my practice to carry the needle of the syringe deeply into the tissues, not stopping until the muscular structures have been reached. In none of the cases in which I have used ergotine in this way have I met with abscess. As a precaution, I have frequently painted tincture of iodine around the puncture made by the needle. The form of ergot used is that known as Squibb's aqueous extract, which is made in a solution, the strength of which is one grain to the minim. Of this solution, I have given 25, 30, and 35 minims without producing any undesirable symptoms.

ORIGINAL ARTICLES.

EXCISION OF SUPERIOR MAXILLA, WITH REMARKS[1]

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J. J. M., æt. 55, married, born in Canada, has been a planter on the island of Cuba for several years past; came to New York for surgical relief, and placed himself under my care. He was seen in consultation by Dr. T. M. Markoe, Dr. R. F. Weir, and Dr. Chas. McBurney, my hospital colleagues. Not being willing to do a grave operation in a hotel, I persuaded him to enter St. Luke's Hospital, which he did May 4, 1884.

The history of his case is as follows, viz.: No history of any hereditary disease in his family. General health has always been good. No history of venereal disease. About two years ago, while riding over his plantation on the back of a mule, superintending some laborers, he was thrown to the ground, striking heavily upon the left side of his face, bruising it severely; at the same time he suffered severe contusion of the leg and back. His recollection is that the contusions of the lower limbs occasioned much more pain and inconvenience than the injuries of his head and face.

Before any tumor of the face was observed, the sight of the left eye "became poor," and there was an increase in the lachrymal secretions. "The eye itself seemed to be stiff." At night there was a slight discharge, which dribbled over the face during sleep. Has never had epistaxis. Began soon after this to complain of frequent attacks of pain above and around the left orbit. About eight months ago he observed a small swelling on the left alveolar process, above the first molar tooth. This tooth was extracted by a dentist in Cuba, who stated that there was some discharge from the cavity, and that the root of the tooth was diseased. This operation afforded some relief for the time.

Two months later, he had a severe chill, followed by a high fever. He then noticed a swelling on the roof of the mouth to the left of the median line, about the size of a hazelnut, and the left cheek now became much swollen. This, however, soon subsided, except for a small swelling which remained in the centre of the cheek. This tumor has gradually increased in size, forcing the cheek outward, projecting into the nasal cavity, and pressing down the hard palate. At about this time, he came under the care of a surgeon in Havana, who had great local reputation. He told him that he had a polypus in the left naris, which he then and there proceeded to remove with forceps and scissors. The result of the operation, as described to me by the patient, was a few shreds of mucous membrane, but no well-defined growth. He also plunged a bistoury into the tumor on the roof of the mouth, and removed a small section for future examination. On the following day his surgeon called and informed him that a thorough microscopic examination confirmed his diagnosis, and assured him that the whole affair was merely a polypoid growth, and was not at all malignant—in fact, that he was virtually cured.

Notwithstanding this, the tumor continued to increase in size and to give him much pain. About the middle of the month of February, 1884, I found myself in Havana in search for health. I was asked to see Mr. M. professionally. Recognizing the presence of a malignant growth, I arranged with him that he should "put his house in order," and follow me to New York, prepared to submit himself to whatever treatment should there be advised. Late in the month of March he was in Havana, expecting to come immediately on to New York, as agreed. At this time he fell again into the hands of the surgeon who removed his "polypus." He now told him that the progress of the disease had at length revealed that the tumor was an aneurism, and proposed to cure him by electrolysis.

The needles were introduced and the current applied. The result was an immediate increase in size and a very rapid growth. He was now utterly discouraged, and, as soon as he was able to travel, "took ship" and presented himself to me for treatment.

Condition when admitted to hospital was as follows, viz.: Since the introduction of the needle there has been a continuous discharge from the old cavity in the alveolar process into the mouth, which discharge has some odor. Breathing through the left nostril is somewhat obstructed. General condition of health is very good; appetite fair; bowels regular. On examination, the whole of the left superior maxilla is found to be occupied by a tumor, about the size of a large peach, which protrudes outwards just below the prominence of the cheek, and extends upwards to the ridge of the orbit. The left eye protrudes slightly. In the mouth a prominence is discovered from the palatal process just below the antrum. The first and second molar teeth upon that side have been extracted; and into the cavity formerly occupied by the first molar a probe can be passed for a short distance, and there is a continuous discharge from it. The skin of the face is normal in color and feel. The surface of the tumor is perfectly smooth, and feels soft to the touch, as though the bone had been absorbed.

May 7, 1884, operation: At 2.30 P.M., assisted by Drs. Bull and McBurney, I operated. The patient

[1] Read before the New York Surgical Society, Dec. 23, 1884.

was etherized by the rectum, so that I should have no delay or obstruction caused by the apparatus used in etherization by inhalation. The flap for exposure of the bone was made after Ferguson's method. An incision through the skin, well down upon the surface of the bone, extending from the inner angle of the eye to the outer limit of the orbit, parallel with and a little below the infraorbital ridge, and the other commencing at the nasal extremity of the first, and carried down along the side of the nose, around its ala to the columna nasi, thence down to the middle of the lip, including its entire thickness. The flap was dissected up rapidly, and turned down. The bleeding points were secured with clamps, the soft parts dissected away from the nasal process, and also the cartilage of the nose from the nasal notch of the maxilla. The left middle incisor tooth was then extracted. The malar bone close to its junction with the maxilla was notched with a small saw. The nasal process of the inferior maxilla at the inner angle of the orbit was treated in the same manner with the saw. The strong cutting bone-pliers were now used for completing the section of the bone, at the outer angle through into the spheno-maxillary fissure, at the inner angle, just below the groove in which lies the lachrymal sac. Two incisions were now made over the hard palate, one posterior and transverse, along the suture between the palatine bone and the horizontal plate of the maxillary bone, the other extending from the inner extremity of the first, along the longitudinal suture, uniting the horizontal plates of the upper maxillæ to the alveolus from which the incisor tooth was extracted. The hard palate was now divided by the large straight pliers, one blade through the nose and the other through the mouth. The whole tumor mass, which was soft and friable, was seized with the fingers and thumb, and twisted loose from its attachments, the scissors being used when required. All suspicious looking tissue was scraped away with a sharp-edged spoon until the surface in view looked healthy and normal. The periosteum was detached with a "scraper," and lifted up from the bone forming the floor of the orbit, so that after the bone was removed well back in the orbit, there should be a support left for the eyeball. The palati bones were left *in situ*, with an uninjured uvula and curtain.

The hemorrhage during the operation was but little, although the tumor itself was exceedingly vascular. Only three animal ligatures were required. The walls of the cavity were covered with iodoform gauze, and the cheek was filled out with three tampons of carbolized gauze, the strings attached to them being brought out through the mouth. The wound through the lip was secured with one harelip pin suture and one silver wire suture. The remainder of the flaps were held in place with continuous and interrupted sutures of fine black silk, and the line of incision was painted over with flexible collodion in which iodoform had been dissolved (one-half drachm to one ounce).

Patient was sent to his room. At 4.50 P.M., he raised himself in bed and appeared partially conscious. At 5.15 P.M., he attempted to speak. Had a movement from the bowels at 5.20, which had some form. Another at 6.30, which was thin and slimy. Neither passage contained any trace of blood. All oozing of blood from wound ceased at 9.30 P.M. There was no vomiting. Rested very quietly during the night, sleeping most of the time. Swallowed small quantities of ice water.

Went on to recovery without any drawback. The mouth was frequently cleansed with boracic acid solution. The tampons were removed from the cavity at the end of the third day, and the cavity packed loosely with carbolized gauze.

Harelip and silver sutures removed on third day. Union by first intention took place throughout entire incision, and all sutures were removed before the expiration of a week.

Was discharged cured May 22, 1884, two weeks after the operation. Only on two days during his residence in the hospital did his temperature reach 99°, and the highest pulse-beat recorded was once 104.

Pathologist's Report: Tumor received from St. Luke's Hospital on May 7, 1884, is connected with the alveolar process of the superior maxilla, left side, and as large as a hen's egg. It is soft, friable, and differing in consistency in different places. It destroys for a considerable extent the bony alveolar process and some of the teeth. It is composed of lobules of epithelial cells of irregular size, supported by a very delicate stroma. The epithelial cells at the periphery of the lobules next to the stroma are low cylindrical; elsewhere they are small, flat, or cuboidal, and distinctly nucleated. Numerous small, round, and spindle cells are seen in the stroma, which also show a goodly supply of bloodvessels.

Diagnosis: Lobulated Epithelioma (Ferguson). After leaving St. Luke's Hospital the patient recovered his health and strength rapidly. The deformity resulting was very little. The lines of incision were scarcely perceptible. His chief inconvenience was from the opening in the roof of the mouth, communicating with the nose, which rendered his voice indistinct, and permitted regurgitation of food so as to annoy him somewhat.

A dentist was consulted, who made a thin plate of gold with teeth attached, which, when in place, obviated the embarrassment, and was worn with much comfort. It was a difficult matter to secure the plate in position so that it would not "drop down." A piece of mechanism was contrived which was very ingenious and effective. To the upper or convex surface of the gold plate a button was attached by a hinge—the button stood up from the surface at a right angle—when the plate was placed in position this button projected into the cavity, it was then made to hook over and clasp the bony palatine plate of right maxilla at edge of the wound by pressing upon one of the molar teeth in the plate which was connected with the button by means of a spring. The plate was easily removed for purpose of cleansing and held very firmly in place. This apparatus he was enabled to wear during the entire time between soon after the first operation and the time he returned to his home in Cuba.

Copied from case-book, New York Hospital: Recurrent carcinoma of the face. Service of Dr. Geo.

A. Peters. Aug. 24, 1884, admitted to New York Hospital.

J. J. M., æt. 55 years. Born in Nova Scotia. Married. Planter.

Family history negative. Has always enjoyed good health until two years ago, when he fell from his horse, striking the side of his face. Last November a swelling appeared in inner side of left hard palate, and gradually increased in size. Patient was operated upon on the 7th of last May, in St. Luke's Hospital, by Dr. George A. Peters, and the left inferior maxilla removed. Recovery good. Three weeks ago a tumor reappeared in the left malar region, and has been growing rapidly ever since.

On admission, general condition good. Examination shows a tumor about the size of a half a pullet's egg, situated below the outer half of left eye, over molar region. The mass is hard, firm, elastic to the feel, and occasionally painful; is attached to subjacent tissues. Skin over the tumor is discolored, but not adherent to it.

Operation, August 27th, was done by Dr. Peters. Etherization was started by inhalation, and continued per rectum. A curved incision was made through the skin over the swelling, running toward the nose; flaps raised, and fleshy mass of the tumor removed. With the rongeur a considerable portion of the zygomatic process was gnawed away, and the prolongations of tumor tissue were scraped away from beneath that process and from the temporal fascia. Hemorrhage during the operation was considerable. Several small sized and one large bleeding point were tied with animal ligature. Rubber drainage-tube was inserted; the wound was sutured with fine black silk. Three ounces of ether were used by the rectum during the entire operation, which lasted for an hour and a half. The second operation did not open into the cavity left as a result of the first one.

Rallied well from the ether and operation; no vomiting, and no rectal symptoms. There was considerable œdema of conjunctiva and eyelids; no pain.

Drainage-tubes removed about thirty-six hours after operation. On the third day the sutures were removed. Union was complete except where the tube emerged; here a small sinus remained open for a few days, when it closed. At the end of a week from the time of operation, the patient left the hospital and went to his hotel. Returned to his home in Cuba, Sept. 13, 1884.

Pathological report by Ferguson, of New York Hospital:

"Examination of the tumor shows it to be a typical epithelioma. Large masses of flat cells are seen in a small amount of fibrous stroma, in which are many young cells of inflammatory origin."

Believing that rectal etherization would be especially desirable in this case by leaving the face unobscured by cone or any apparatus, I devoted some time to contriving a method which should be both safe and sure. Administration of ether by this channel had been but little practised, although fortunately comparatively much had been recorded in the journals. The chief dangers seemed to be either from overdistention of the bowels with ether vapor, or tenesmus with bloody discharges from the rectum, caused probably by fluid ether being forced through the tube and deposited in contact with the mucous membrane, producing inflammation. Experiments had demonstrated that the cool rubber tube produced rapid condensation of the vapor driven through it. The amount or rapidity of condensation did not seem to depend either upon the length or calibre of the tube. Ether boils at a temperature of 96° F. Theoretically, it seemed that if the vapor were superheated it would condense rapidly. The temperature of the water in which the vaporizer was immersed was kept as nearly as possible at a temperature of from 103° to 105° F. If the temperature is raised to 120° or 130°, the ebullition becomes so active as to drive over the fluid ether in considerable quantity.

Dr. Ogden C. Ludlow, who occupied the position of senior walker in St. Luke's Hospital, contrived a very simple and ingenious apparatus, by means of which we were enabled to secure the desired results.

It may be described as follows, viz.: two glass vials, of a capacity of from six to eight ounces. One vial, intended as reservoir for containing the supply of ether in sufficient quantity to last throughout the entire operation, should be marked with graduate lines, so that the amount used may be accurately measured. This is connected with the second vial, intended to be used as the vaporizer, by a rubber tube with a forcing bulb, as in Davidson's syringe. Vial No. 2 is placed in a jar of water with a thermometer, so that the water may be kept at the required temperature. To a curved glass tube projecting through the stopper of vial No. 2 is attached a rubber tube, about two feet long, on the distal end of which is a nozzle for introducing well into the rectum. Into this rubber tube, about eight inches from the nozzle, is inserted a short glass tube, from which the apparatus can be easily detached when the vapor is not needed. The glass also enables one to discover when fluid ether is driven through it. Through the cork stopper of vial No. 2 a second glass tube is passed, which tube receives the rubber from vial No. 1, through which ether is fed as required from the reservoir.

Here we have a very simple and easily managed apparatus.

When a sufficient quantity of vaporized ether has passed into the rectum, the tube is slipped off from its glass attachment near the anus and left in situ. The connection can be rapidly reëstablished when vapor is needed. This tube left in the rectum has also the advantage of affording a ready escape for any excess of ether vapor which may have been driven on, or for gases generated in the bowels.

To show how satisfactorily the apparatus works, I will here read the report of what was very carefully observed and recorded at the time by Dr. Ludlow, who had the sole charge of the administration of ether in the case.

"May 7th, at 2.30 P.M., patient was etherized per rectum, half an ounce of brandy having been given previously. At the beginning, pulse 104. One and a half ounces of ether were then forced into the vaporizer. Within one-half a minute he tasted the ether in his mouth, and was at once seized with a

desire to evacuate the contents of his bowels, although two enemata had been given in the morning. In five minutes the muscles of his arms were relaxed, and the conjunctiva but slightly sensitive. After another minute he opened his eyes, spoke, and turned over on the table. Another ounce of ether was then forced over into the vaporizer. The ether cone was then placed over his face. He struggled for a short time, but was completely anæsthetized in eleven minutes from the commencement, when the cone was removed. Ether was administered per rectum for fifteen minutes, when the tube was disjointed. This was followed by a discharge of ether and foul-smelling gas through the tube. After this, the tubes were connected for one or two minutes at a time; making the total time of actual etherization thirty minutes. The last charge of ether vapor was given one hour and thirty-two minutes from the start, but the operation was not completed for thirty minutes more. At the end of two hours and ten minutes, the conjunctiva became sensitive and the arms commenced to stiffen. Pulse 120, and fairly strong. Amount of ether used, three and a half ounces."

For the second operation, done August 27, 1884, the ether cone was applied over the face until he came perfectly under its influence, when it was removed. The tube was then introduced into the bowel, and rectal etherization was employed throughout the time of the operation. The apparatus used at the New York Hospital was extemporized from the materials at hand, and was by no means as complete as the one described above. It answered the purpose, however. Patient was anæsthetized for an hour and a half; only three ounces of ether were used, and this only for a few minutes at a time, connecting the apparatus only when the effect of the anæsthetic seemed to be passing off.

My experience in operating upon the mouth, or its neighborhood, involving either complete or partial excision of the jaw-bone, notably in several cases of extirpation of pharyngeal tumors of a malignant nature, reports of which have been made before this Society, led me to appreciate the great hindrance to rapid or thorough removal caused by the presence of the ether cone as generally employed. The operator is frequently obliged to interrupt his manipulations at a critical point in order that more ether may be given, or the mouth and throat cleansed of accumulated blood, etc. In order to obviate these hindrances, and also to render it safe to use the actual cautery where required, I had on several occasions performed laryngotomy as a preliminary step. This enabled me to administer the ether through a tube inserted in the wound, and extending to the reservoir of ether at any chosen distance. This procedure also enables the operator to plug the fauces, and thus prevent the influx of blood, etc., into the air passages. The cases in which I had used this procedure were so entirely satisfactory that I resorted to it without any hesitation. I have seen no bad results from the opening in the windpipe, which opening I always close before the patient is removed from the table. When rectal etherization was first brought to my notice, I recognized in it a less formidable adjunct, provided it should be proven reasonably safe. By it we accomplished all that is afforded by laryngotomy, save that it will require much greater care in packing the posterior fauces.

The use of the rectal method in the two instances above recorded, encourages me to believe that, with proper precautions in its use, we have a method which is both safe and sure.

Previous to the year 1826 considerable portions of the upper jaw had been removed by surgeons in various countries, notably by Dr. Alexander W. Stevens, of this city, who, in August, 1823, removed a large portion of the upper jaw for a disease of the antrum, and seven years afterward his patient was in perfect health. Dr. Stevens claimed that he was the first to operate upon the principle of cutting through the sound and not the diseased parts.

Dr. David L. Rodgers, of New York, in May, 1824, successfully removed the greater portion of the superior maxilla for osteo-sarcoma.

Mr. Lizars, of Edinburgh, in 1826, first proposed the entire removal of the upper jaw. In 1827 he attempted to carry his plan into execution for removal of a medullary sarcoma of the antrum, but was obliged to desist on account of the hemorrhage.

On May 26, 1827, Gensoul, of Lyons, removed the entire superior maxilla, with the whole of the palate bone. Patient recovered.

At length, in August, 1829, Mr. Lizars performed his second operation, which was successful. Surgeons of the present day do this operation as opportunity offers with generally good results.

Resections of portions of the superior maxilla, for the purpose of securing access to tumors in posterior nares or fauces, is frequently practised. The method of incision of the soft parts in order to reach the bone is a matter of importance, and deserves consideration.

Mr. Lizars used an incision across the cheek, from the angle of the mouth to the malar bone; or, when the tumor was very large, employed an incision through the lip into the nostril, with a vertical cut on the malar bone. With the saw and bone forceps, the maxilla was separated and removed. This was the cut made by most surgeons, until Sir William Fergusson proposed an important modification in the method of procedure. The deformity resulting from the methods in vogue, led him to devise the plan of carrying the incision solely through the medial line of the lip into the nostril, in the manner used by me and described in my note of the operation.

In the operation for removal of the superior maxilla, the hemorrhage is, in some cases, very profuse; but if done rapidly and dexterously, securing the larger bleeding vessels with clamps, the surgeon need not fear fatal bleeding.

I will bring my paper to a close with a few remarks as to the class of cases in which the operation is justifiable.

Necrosis of the upper jaw, whether as the result of injury or disease in neighboring soft parts, syphilis, etc., requires operation sometimes even to the extent of removal of the entire jaw.

Non-malignant tumors of the upper jaw, as fibroma and enchondroma, occasionally attain a size requiring removal of the entire bone.

Hyperostosis of the jaw, which consists primarily in periosteal inflammation, leading to the deposit of new bone, and the expansion and filling up of the original osseous structure, is unconnected with syphilis or stroma, and appears to be beyond the control of remedies; and not infrequently reaches so great a size as to cause much deformity, and justify the removal of the entire maxilla.

It is in connection with malignant tumors of the upper jaw that the surgeon is often called upon to decide as to the propriety of removal.

It is now well established by the experience of many operators that the operation, even when so radical as the removal of the entire jaw, does not result in a cure, we can predict with almost absolute certainty that the disease will return within a year. The temporary relief afforded in connection with the moral effect of the operation will, I believe, justify it.

In the case above narrated, both the patient and his wife declare that, although the disease has again appeared, and no further operation is contemplated, the relief from pain and horror, experienced after the operation, renders them satisfied that it was done.

When the patient sailed for Cuba, about the middle of September last, a careful inspection of the cavity, seen through the opening in the roof of the mouth, revealed a recurrence of the disease to a slight degree. Under date of December 16th, I have heard by letter that the disease is progressing slowly. Mr. M. is decidedly of the opinion that the growth is retarded by the use of the fluid extract of red clover blossoms, which he has used diligently ever since the operation, in half ounce doses three times a day.

FORMER VIEWS AS TO THE CONTAGIUM OF CHOLERA.

TREATMENT STILL INDEPENDENT OF ITS ETIOLOGY.

BY EZRA M. HUNT, M.D.,
OF TRENTON, N. J.

Now that the germ theory of disease, and especially its relation to Asiatic cholera, is attracting so much attention, it is neither uninteresting nor unprofitable to note the earlier history of these investigations. While it must not discourage us as to future possible attainments, it may so moderate our zeal as to lead us more accurately to weigh the significance of what has been discovered and to assign to it only its real prominence.

As long ago as 1838, Boehm made some very definite observations. In the ninth report of the Medical Officer of the Privy Council of Great Britain (1866), Dr. John Simon very forcibly calls attention to these observations. "If," says he, "the doctrine of a cholera fungus should hereafter be substantiated, it will probably be conceded that Boehm deserves the credit of having first published a thoroughly valid account of the phenomena of cryptogamic vegetation in choleraic intestines and discharges, and that Hallier's researches do not better join on to the recent essays of Thomé and Klob than they might have joined in 1838 on those of Boehm. The fifth section of his admirable little book describes as almost constant that the whole extent of the intestine (but generally the large intestine least) teems with a vegetation of microfungi; that innumerable round and oval or more elongated corpuscles are to be found in all the vomit and dejections as well as in the canal, sometimes single, sometimes two, three, four, or more joined end to end, as links of a chain, and these chainlets sometimes branching; that such forms are held together in mucous floccules and come best to light when liquor potassæ is used; that within the small intestines they are often so numerous that not the smallest specimen will fail to show numbers of roundish fungic forms amid the débris of the epithelium. He appends an illustration, which shows quite unquestionably the forms of cryptogamic growth, and refers for similar forms to Schwann's then recently published investigations of yeast."

In a pamphlet published in London in 1833, Dr. Tytler had so far connected a fungus of the rice plant with cholera as to attract much attention. It led Hallier, in 1866, to raise rice plants, of which in their early stage of growth he made longitudinal sections, and found fungus-threads in great numbers perforating the epidermis of the plant in several places above the juncture of the rootlets. By the aid of glycerine a multitude of cryptococcus cells were seen, and had the same characters as when known urocystis grows within cereal plants. While not proving the identity of the parasitic fungus with the cyst-bearing plant, he did show that a form of the same type could be produced in rice watered with cholera evacuations. (Buchanan, p. 515.)

The discussions in England in 1849 as to a so-called cholera fungus were very extended and earnest, as the journals and some disquisitions fully attest. It was in that year, too, that our own Dr. Mitchell, of Philadelphia, wrote "On the Cryptogamous Origin of Malarious and Epidemic Fevers." The Bristol Medico-Chirurgical Society had Drs. Britton and Swayne at work as a microscopical committee, and in their examinations of choleraic discharges had independently of one another observed often in very large number certain secular forms, "annular bodies," "cholera cells," etc., which they believed to form a connected series, and to be characteristic and causative of the disease. Mr. John Quekett, then an eminent microscopist, examined Mr. Britton's specimens from air, vomit, and dejections and "had no hesitation in stating that, in his judgment, they were successive stages of development of the same body, which he believed to be of a fungoid nature." Dr. Budd, then of Bristol, seems to have accepted these views, while Dr. Snow committed himself no further than to say that there was a something which being swallowed can increase and multiply within the stomach and bowels. Dr. Cowdell, of Dorchester, the year before, had sought to establish on theoretical grounds that cholera must depend on a microscopical fungus. At the time, the report made to the College of Physicians by Drs. Baby and Gull and Mr. Marshall was circulated more than the views and observations of these suburban practitioners; although Hallier himself (1866) very fairly,

as it seems to us, recognized them as bearing on the hypothesis of a vegetable parasitic origin.

To Dr. Ernst Hallier chiefly (Leipzig, 1867) must be given the credit of the earliest, most minute inquiry in this direction. The care which he took "to prevent the accidental introduction of other fungi into his experiments and his check experiments to detect possible errors," are still the admiration of those who now work with all modern facilities. The stools are described as having characteristic vegetable elements which consisted of a fine fungiform matter (Hefe) which floated, and of more highly developed spore-cysts which sank to the bottom. These spore-cysts are described as yellow or brownish bodies, consisting of a pale membrane enclosing highly refracting colored spores. The cyst wall undergoes a series of changes, ending in its rupture or solution, and the spores then become free. The spores, by progressive partition (a process which may begin before they leave the cyst), resolve into very small cells, grouped into balls and heaps, which Hallier calls "colonies" of micrococci. "The small cells of micrococcus constitute the fungiform matter which is the other vegetable element seen in the evacuations." Besides these two elements, torula-like bodies were found in smaller numbers, and were shown by experiment to develop from the micrococcus cells; nuclei growing within the ball or heap and sometimes constituting the greater part. Around some of these nuclei a very delicate cell-wall may be found, but to detect this glycerine must be employed. The "formation of these cells, which occur singly or in rows, marks a step toward a higher development of the micrococcus." Even this outline shows what studies were made in this direction as preliminary to discoveries announced more recently.

However important new observations may be in a biological sense, let us not too hastily conclude that they have given us any real information as to modes of prevention or treatment. Dr. Simon, in connection with the article of Dr. Buchanan (see Report), also refers to the writings of Prof. Pacini, of Florence, who, "from 1854 to the present time (1866), has described the choleraic processes as consisting primarily in the destruction of the epithelium and villi of the intestines by an infiltrative vibrional development, and has argued that these vibriones and their germs—molecules of less than $\frac{1}{25000}$ of an inch in diameter—poured forth in millions in the discharges of the sick, must constitute the contagium of cholera."

It appears to us that some of our more recent descriptions differ more in classification, and in a more correct nomenclature, than in actual observation, especially when we also come to read over the descriptions by several other observers. Is not this remark of Dr. Simon in 1866 still in order, "It appears to me that not only the mere *biorama* of the intestinal contents, healthy as well as choleraic, will have to be studied far more extensively than it has yet been, and in all its accidental variations, but also that, in the general study of zymoses, no doubt must remain as to the etiological *significance* of the low organic forms which attend the chemical transformation"?

Pacini quotes from Bloch a very graphic expression of the truth in calling this field of study the "infusorial chaos of the intestines." Some order has come out of this chaos, but we must still think not enough to determine etiological relations or to settle much as to prevention or treatment. The application of Koch's solution of corrosive sublimate is not a result of any new knowledge as to the comma-bacillus, and the ephemeral life of it when thoroughly dried has as yet, perhaps, no practical application beyond what has long been known as to the value both of heat and dryness in disposing of all vegetable organisms.

It is to be hoped that, in case cholera should come among us, the Government will be prepared to sustain skilled experimentation, such as was provided for at Havana as to yellow fever. But it is to be insisted upon more earnestly that every particular of protective quarantine shall be provided, so that at the point of embarkation and on the ocean there shall be inspection, and both "sick and well call," and that all passengers, if need be, come under the daily notice of the surgeon. If this plan were to prevail, and all concealment were to be avoided, no case of cholera from an eight or ten days' voyage ought ever to arrive at our ports. In prospect of possible arrival, municipal and other health officers have little time to study or to be in expectancy about that myriad life of disease in which "hovers a multitude of minute bodies, differing essentially in their nature and animated by forces generating forms, giving rise to most extraordinary phenomena."

Our hope is in the study of the history of the clinical phenomena. Whatever will forestall the entry of the dangerous particles; whatever will put the system, or the part invaded, in a condition unfriendly to their fructification, or whatever will, in a medicinal way, interfere with the multiplying process, is the thing to be sought. We have alluded to the knowledge of over a quarter of a century ago, to show that no great change of base has been made by any recent discovery, and also to emphasize the need of that kind of sanitary, medical, and administrative preparation which is worth more than any recent "study of germs," however helpful this may eventually be for medicinal and non-medicinal therapeutics.

SOME POINTS IN THE RELATION OF SYPHILIS TO PULMONARY DISEASES.

BY JOHN FERGUSON, M.A., M.D., L.R.C.P.,
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THAT there is often a very close relationship between diseases of the lungs and syphilis has for considerable time occupied my attention. We have all met with cases of pulmonary trouble that may have baffled us to find a satisfactory cause. A case that is diagnosticated as phthisis occurs in one member of a family, all the others being in perfect health. There may not be the slightest trace of consumption in the ancestry; nor has the person, who comes under our care, been so employed as to lead to the suspicion that his disease has arisen from such employment.

The difficulty of tracing to their true origin such cases of chronic lung disease as these, when we can find no evidence of another case in the family record, is sometimes very great, if not wholly impossible. One or other of the parents or grandparents may have had syphilis, and the fact be beyond our reach. There is no doubt, however, that the offspring of such parent or parents suffer differently. One has eruptions of the skin, another caries of the bones, a third obscure and obstinate nerve lesions, while a fourth has, as I shall try to show further on, disease of the respiratory organs. Nor is it necessary that the syphilis be inherited to cause lung disease. The person who contracts syphilis may suffer thus in his own lifetime.

The first case that set me a-thinking in this direction occurred in the person and family of a schoolteacher, aged, when he consulted me, twenty-eight. The examination of the chest gave only too certain evidence of phthisis. Not suspecting syphilis, he was treated in a manner calculated to benefit a consumptive; but I need hardly say that the result was far from being good. Near the close of his life, after he had been under treatment for a year, he informed me that seven years previously he contracted syphilis, and was treated for it during a period of about two months. On inquiry, I found that he had suffered very little with sore throat, and that the rash on the skin was but slight.

On learning this, he was put on anti-syphilitic remedies, but despite these he sank and died, as his friends believed, an emaciated consumptive; as I believed, a syphilitic with pulmonary lesions.

One of his children, a little boy, had died of a wasting condition before the father came under my care. The remaining children, two little girls, were aged five years and one year respectively. The elder of these was delicate, but being sent to live with an uncle she passed from my notice. The younger took on lung disease, which progressed rapidly, and the little patient died from a copious hæmoptysis, a rare occurrence in so youthful a patient. I must here state that the mother was a very obstinate person, and, believing the child to be consumptive and incurable, would have nothing done for it.

In these cases we have the appearance of wasting lung disease in a family whose blood relatives on both sides were perfectly free from phthisis. The only likely cause is the syphilis which the father contracted about six years before he consulted me first. At all events, if the syphilis in the father was not the cause of the lung disease in his own case and in those of his children, we have the coincidence.

Another family, from which some very important conclusions may be drawn regarding the relationship of syphilis and pulmonary diseases, came under my notice in the fall of 1882. The first patient from this family was a young man of about twenty-one years. He came to me on account of his consumption. On examining the chest there were well-marked evidences of disease. He coughed a great deal and expectorated freely. His pulse was frequent and his temperature 100° F. I inquired carefully as to his private life, but with entirely negative results, there being no suspicion that he had ever had syphilis. He was treated for some time in a general tonic manner, with very slight improvement. After my patient had been under my care for nearly three months, the father called one day to talk over the condition of his son. At this interview I drifted the conversation onto his own former state of health, and ascertained that when a young man he had had a severe sore throat. On examination of the fauces, marks of former syphilis could be seen. He also stated that he had suffered at the same time with cutaneous disease; that his general health was bad, and that there were pains in his bones.

This seemed to me to be a clear case of syphilis in the father; and I argued accordingly as to the case of the son, whose treatment was changed from that already ordered to an anti-syphilitic one. From this time onwards the progress of the case was good. He began to gain in flesh, his cough became less troublesome, and the expectoration decreased. The unhealthy sounds in the lungs gradually disappeared, and I got the credit of curing a consumptive.

Almost to a day, one year after the above patient consulted me, his sister came, and for the same condition—consumption—as she thought. There was not the same difficulty in the way this time. My former experience stood me in good place, and enabled me to proceed at once to a specific form of treatment. The results were, as in the former case, good.

Previously to either of these patients consulting me, a brother had died of some pulmonary condition.

I do not pretend to say why it was that three persons contracted pulmonary disease as a result of inherited syphilis. It might possibly be that there was a weakness in the respiratory organs, and it became distinctly apparent under the influence of the syphilitic virus. One thing remains, as a clear fact, that two of the three recovered from their lung disease under proper treatment for syphilis; and the third, who died, might have recovered under the same management.

The third instance of the ill-effects of inherited syphilis on the respiratory organs was afforded by the child of a man whom I treated for the disease some time before he was married. This man, though well warned of the fact that syphilis required a prolonged treatment, was not overly observant of his warnings. He married, and became the father of the child which is the subject of the present remarks. This child did not come under my notice until it was about one year old, when I was consulted on account of frequent attacks of spasmodic laryngitis. I was told that these attacks had been very frequent for some months. The usual mode of treatment was recommended. The child now passed from my observation for fully six months, when I was again sent for, and informed that the attacks still continued with as great frequency and severity as ever. Recalling the fact that the father had suffered from syphilis, the child was treated with a view to this being the cause of the croup. Potassium iodide was ordered internally, and inunctions of ung. hydrarg. externally. Shortly after this treatment was commenced the child got well, and has continued so ever since.

In this case neither father nor mother had any tendency to disease of the respiratory organs. They were neither strumous nor phthisical. As the father was a known syphilitic, and the child's spasmodic laryngitis was rapidly cured by a course of specific treatment, one can hardly but admit that the inherited taint here stood to the child's sufferings in the relation of cause and effect.

A fourth and instructive case was that of a young man who had been treated for syphilis in one of the Dublin hospitals. He was a rather intelligent person and could relate accurately the circumstances connected with the disease—its name, and the symptoms it gave rise to. This was about seven or eight years before the date on which I saw him.

At my first visit I found him suffering with asthma and bronchitis, both of which proved very obstinate. He informed me that he had been playing in a band almost every evening during the entire winter and spring up to the date when I saw him, in May.

This was his first attack of asthma, and, apart from slight colds, his first attack of bronchitis. The usual remedies for asthma had only an ameliorative effect. The bronchitis continued, despite all efforts, and he had frequent attacks of coughing, severe enough to give rise to some hæmoptysis. It was after attending him for considerable time that I learned his syphilitic history as already stated.

On making this discovery, he was ordered iodide of potassium, and from this time onwards he improved steadily. There are a certain number of cases of asthma that do well on potassium iodide, but whether all of them have a syphilitic taint or not I do not pretend to say. I have met with other cases of asthma that did not improve on the administration of this drug. The clinical facts of importance in the present case are that the patient had had syphilis, that he had been engaged in a band, and had induced bronchitis from the exposure and strain, and that no improvement took place until an antisyphilitic treatment was ordered. It seems to me absurd to deny that there was some connection between the two diseases in the above case.

The case to be mentioned next is also an example of asthma. This time, however, the syphilis was evidently hereditary. The patient was twenty-four years of age, and came to me from the country, through the recommendation of a former patient. His teeth were very characteristic of inherited syphilis. His father had suffered, as far back as my patient could remember, with scaly eruptions of the skin. There were no brothers or sisters, so that additional information from this source was impossible. The most careful investigation gave no suspicion that the young man had contracted syphilis during his lifetime, while the circumstances just mentioned regarding his teeth, and the skin disease of his father, strongly favored the belief of its hereditary nature.

One day in July, while very warm, working in the hay-field he was caught in a shower, and suffered most severely from bronchitis for about a week, when the asthmatic breathing came on. After this had existed for four months, to such an extent that he had only been able to lie in bed some two or three nights, he came to me. At this interview I gathered the above information regarding himself and his father.

During the four months previous to his consulting me, he had been variously treated for asthma, and without success. Knowing that potassium iodide was useful in some cases of asthma, and suspecting syphilitic mischief to be going on in this case, he was at once put on large doses. The result was most gratifying. At my request, he secured for me copies of the prescriptions he had been using. They contained chloral, bromide, asafœtida, lobelia, belladonna, opium, grindelia, the smoking of stramonium leaves, and the burning of nitre paper. From these remedies he derived only temporary benefit.

Here, again, we have pretty strong evidence that the asthma was in some way dependent upon the syphilitic taint. The probability is that, when the bronchial inflammation took place, the irritation from this caused the disease to become manifest in the lungs in somewhat the same way that an injury to a syphilitic may be recovered from very slowly, the tissues of the body not being in a good state of nutrition.

Another experience which set me thinking on the possible connection between inherited syphilis and phthisis came under my notice lately. One night I was sent for to attend a woman in confinement. It proved to be her fourth child. She had had no miscarriages. After the child was born, the mother began telling me the story of her misfortunes with her former children. She informed me that they had all died quite young—one three months, one five months, and the other nearly a year old. She also said that they all appeared to die in decline. They began coughing, and gradually emaciated away. I could find no special evidence of syphilis in either parent, as far as the mother could answer my questions. Her sister died in decline; but, further than this, I could trace nothing.

This child, like the others, soon began to show signs of failing health. Not knowing what to do, and being anxious to make some attempt, the mother was ordered perchloride of mercury, gr. $\frac{1}{12}$ three times a day; and the child, pot. iodidi, gr. $\frac{1}{4}$ twice a day. This was purely tentative treatment, yet it turned out to be a good experiment. The mother's own health has improved very materially. The child has done well ever since, is now between seven and eight months, and there is not the slightest appearance of its being attacked by any wasting disease.

Now, in this case, we have two or three valuable lessons to learn. In the first place, the child's aunt died of what was called consumption. There would, therefore, seem as if there was a tendency of some kind to pulmonary disease in the family on the mother's side. This tendency may have been transmitted to the children of the person I attended. In the second place, however, we have the very interesting fact that the child just mentioned recovered under antisyphilitic treatment, through the milk of the mother and directly to itself. Now, consumption is not amenable to such remedies. The only conclusion then is, that, whatever the tendencies of the family may have been to phthisis, the real cause

of it in this case was some concealed syphilitic taint. In the last place, had the syphilitic condition been a little weaker, as it might have been, these children could possibly have escaped it, and developed and strengthened the tendency to phthisis; so that, in the event of their reaching maturity and having children, these latter would only show this phase of the hereditary dyscrasia. Thus, it seems to me, that the syphilitic condition gradually weakens; while the unhealthy tissue state arising out of this, and in some cases being mainly marked in the lungs, becomes the *fons et origo* phthisis. This view does not in the least clash with the doctrine of the bacillus tuberculosis. The teachings of some of our best observers, including Austin Flint, Sr., is to the effect that there must be a susceptibility to the bacilli in such persons as become consumptive. This susceptibility can come from any cause producing malnutrition, and I think that there is none more likely to cause this malnutrition of tissues than neglected syphilis.

I have now to give the history of a family that has been under my notice for more than three years, and during this period I have had a great deal to do with the children, four boys in all. These boys ranged in age from eighteen months to seven years at the time I commenced attending them. I do not think I ever knew a family of children more subject to bronchitis than these boys. From time to time they would take fresh attacks, and it was an exceptional occurrence to find them all free at any one time. Their attacks were of a somewhat mild, yet chronic character.

Neither the father nor the mother of these children was liable to colds or coughs. The father's brother had died of consumption, and the mother's father of pneumonia. With these two exceptions, the family record was good on both sides, as far as any form of pulmonary disease was concerned.

After I had been attending the family for about two years, the father asked me one day if syphilis could be completely removed from the system. From this, as a starting-point, we had a lengthy talk upon this disease, during which he admitted that he had had it many years before he was married, and that he had taken medicine for a year, though not very regularly.

On my finding this out, the children were treated with mercury and iodides, and with the very best of results. They soon recovered from their tendency to contract bronchitis, and improved in general appearance. The mother said to me one day, that the last medicine was what did it, as they all got well after it was ordered.

One more remark in conclusion. I strongly believe that the low state of health which often leads up to consumption is, in not a few cases, due to inherited syphilis. This is the blighting cause that undermines the general condition of body nutrition, which so often precedes phthisis. The late Dr. Gross taught that scrofulosis was often a run-out syphilis, or this taint became weakened by passing through several generations. Just so I think with a certain percentage of tubercular cases.

The proportion of consumptive cases that are due to syphilis, I cannot in the least say, as my statistics are not sufficiently extended. This would require a long series of cases, and much time. Nor do I know the percentage of those chronic lung diseases, due to syphilis, that would yield to specific treatment. There is no doubt of the fact that many such cases, like syphilitic lesions elsewhere, would recover; while, at the same time, others would not. For example, where the syphilitic taint is remote, it might so act as to produce only a predisposition; and the phthisis, being excited into existence by such conditions as we know to give rise to it, might be incurable The more recent the syphilis, the more likely would treatment, directed toward it, be successful in arresting pulmonary disease that might have arisen from it. On the other hand, the syphilitic taint coming from a grandparent would show itself in little else than a mere cachexia. On this cachexia, true tuberculosis or other chronic lung disease being implanted, the prospects of treatment would be very much less promising, as it would approach more nearly a case of phthisis, and less one of syphilis.

MEDICAL PROGRESS.

RESECTION OF RIBS FOR PYOPERICARDIUM.—At a late meeting of the Verein Deutsch. Aerzte in Prag, PROF. GUSSENBAUER exhibited a boy, 13 years old, in whom he had evacuated by thoracotomy the fluid of a pyopericarditis accompanying an acute osteomyelitis. The operation was successful, and the boy entirely recovered. The osteomyelitis resulted from a fall upon the right shoulder, which was followed by local pain and high fever, with great swelling of the shoulder and adjacent parts. A diagnosis of osteomyelitis was shortly made; and on the 3d of May, fourteen days after the accident, the boy was operated upon. An incision at the infraspinous fossa was made, and was followed by the escape of pus, and the bone presented a grayish appearance. The operation was done with antiseptic precautions. The temperature did not fall as expected, but rose, without any apparent cause.

On the 20th of May, fluid was discovered in the left thorax, the heart was not noticeably displaced, and the intercostal spaces not obliterated. At first, a left-sided pleurisy was suspected, and an exploratory puncture showed a puriform exudation. The patient at last becoming cyanotic, an operation was decided upon, and five ribs were resected. It was then noticed that the intrathoracic fascia was not thickened, and further examination showed the effusion to be pericardial. The pericardium was then fixed to the edges of the wound to prevent escape of the fluid, on its evacuation, into the pleural cavity. During the operation, the heart could be seen, and felt palpitating. The pericardium, after the withdrawal of the purulent contents, was washed out with a thymol solution. The following day, there was marked improvement, the temperature fell at once, and complete restoration soon followed.—*Wien. med. Wochenschr.*, Nov. 21, 1884.

EXPERIMENTAL THYROIDECTOMY.—Whilst the subject of the relations of the thyroid gland to myxœdema and allied affections is attracting so much attention both at home and abroad, it will be useful to give an abstract of the results of a series of experiment per-

formed by Schiff, who is one of the foremost workers in this field of inquiry. All the animals from which the thyroid gland had been removed died within from four to twenty-seven days after the operation; and those animals that survived more than sixteen days died after the wound had completely healed. Somnolence and indifference, slowness and hesitation of volitional movements, fibrillar contractions of the muscles, alteration of the respiratory rhythm (so-called *respiration cardiaque*), sensations of itching of the skin, and diminution or disappearance of tactile sensation, were the chief phenomena observed. The excitable area of the brain did not react to the most powerful galvanic stimulation. As death approached, the arterial blood-pressure underwent an extraordinary fall, owing to the dilatation of bloodvessels. The muscular tremors disappeared on section of the motor nerves supplying the affected muscles. The symptoms observed in different animals varied considerably. Schiff has concluded that the thyroid gland exercises a great influence over the nutrition of the central nervous system.—*Lancet*, Dec. 13, 1884.

HYDROCELE IN WOMEN.—HENNIG, in *Centralbl. f. Gyn.*, October, 1884, remarks that hydrocele in women is a rare disease, and that but thirty-nine cases have been reported. It is observed at all ages, but most frequently in women who have borne children. Ordinarily, it exists without pain. At first the tumor is small, and disappears upon lying down. Scarcely any fever is produced, except when the tumor is inflamed.

The treatment consists in reducing the tumor, and maintaining the reduction by a bandage till the canal is closed by adhesion. In two cases, cure was obtained by simple puncture; in another, by injection of iodine. Good results were obtained also by passing an iron wire through the tumor, and tightening it till the walls are in apposition.

TREATMENT OF URTICARIA BY JABORANDI.—M. GUÉNEAU DE MUSSY has treated urticaria in arthritic subjects successfully with jaborandi. The mode of administration was: powder of jaborandi, extract of guaiac, āā gr. iss, benzoate of lithia three grs., in one pill. Two pills were at first given in twenty-four hours, and the number increased to four. The treatment was continued many months. Improvement was prompt.—*Revue de Thérapeutique*, Dec. 15, 1884.

MODIFICATION OF SCHEDE'S EMPYEMA OPERATION.—DR. OTTO SPRENGEL reports (*Archiv für klin. Chir.*, Bd. xxx. S. 618) the following modification of Schede's operation for empyema. (It will be remembered that Schede resects a piece from the thoracic wall, making a trough-shaped opening through which the pleural cavity may be washed out.) Sprengel resects two ribs to the extent of several centimetres, scrapes out and disinfects the pleural cavity, and tampons it with an antiseptic dressing until the cavity is filled by granulations, and is thus soon contracted.—*Centralbl. f. d. med Wissensch.*, Oct. 25, 1884.

LESIONS OF THE NERVOUS SYSTEM ETIOLOGICALLY RELATED TO CUTANEOUS DISEASE.—DR. H. RADCLIFFE CROCKER, in a learned article on this subject, which appears in the October number of *Brain*, deduces the following conclusions:

That less serious consequences ensue from cutting off the nervous supply than from irritant or inflammatory lesions of the parts of the nervous system that affect the skin.

That the kind of eruption produced by the nervous system varies greatly, often without any evident reason, when the nervous defect is apparently the same in place and kind.

That the same eruption may owe its origin to any defective link in the nervous chain from the centre to the periphery.

That the same kind of nervous lesion that at one time appears to excite an eruption or other nutritive defect in the skin, even more frequently produces no change in the skin whatever.

The lesions other than atrophy that result when innervation is abolished are often traceable to external injurious influences which the tissues, when unprotected by the nervous system, are unable to resist; but we know nothing of the conditions that determine the nature of the eruption or other skin defect when the nerve lesion is irritative, nor what it is that determines whether there shall be any eruption, or none at all. This uncertainty of effect suggests that the nervous influence is an indirect one.

The cerebral effect appears to vary according to whether its control over the vaso-motor centre is increased or decreased and to the secondary changes it induces in the cord. No localizing lesions have yet been found for its influence on the vaso-motor centre.

In the spinal cord the fibres that preside over the nutrition of the skin are bound up with the sensory fibres, and reside, therefore, mainly in the posterior columns.

That outside the cord the path is by the posterior roots, the spinal ganglia, and the sensory fibres, and that lesions of any one or more of these may lead to changes in the skin.

THE COMMA-BACILLUS OF CHOLERA.—In the stools of nine cases, examined during the recent epidemic, M. BABÈS found, in the mucous membrane of the ileum, comma-bacilli in nearly all, and cultivated them according to Koch's method slightly modified. Instead of agitating the fecal matter taken from the intestine with gelatine, liquefied by heat, he began by agitating it with sterilized distilled water, and then cultivated a drop of this water upon a plaque of gelatine. This method can be advantageously combined with that indicated by Koch.

M. Babès sought without success for the comma-bacillus in other organs than the intestine. However, in one case, he cultivated a tube containing a portion of the kidney taken from a cholera patient, and obtained the comma-bacillus. As this case is unique, and is not confirmed by other experiments, he suspects it was due to some oversight, and believes it does not invalidate the results of former experiments.—*Le Progrès Medicale*, December 6, 1884.

THE NEW OPERATIONS FOR CÆSAREAN SECTION.—In an interesting paper in the *Deutsche med. Wochensch.*, December 18, 1884, VOLKMANN reviews the different

operations for Cæsarean section, and makes the following practical suggestions as to the method to be selected:

1. The old method of Cæsarean section, whether upon the dying or dead woman, must be performed according to the established principles, when the end to be attained is the speedy delivery of the child.

2. Cæsarean section with the peritoneum included in the suture (the modified Sänger's method) should be performed according to the relative indications—*i. e.*, if the woman does not wish to be deprived of the power to conceive, or, if it is called for, in cases of deformity, carcinoma of the cervix, etc.

3. Porro's operation is recommended in all cases of osteomalacia, and marked contraction of the pelvis, and also when a second operation would be required should pregnancy again occur. It is also required in cases of incurable tumors.

MUSLIN OINTMENTS IN THE TREATMENT OF DISEASES OF THE SKIN.—In an instructive article in the *British Medical Journal* for December 20, 1884, on certain new methods in the treatment of diseases of the skin, DR. GEORGE THIN maintains that there is no doubt that the unsatisfactory results of much of the treatment of eczema by ointments is due to the difficulty which is experienced in getting the affected skin well covered with the unctuous application which is prescribed. To overcome this difficulty, Unna conceived the idea of incorporating stout unstarched muslin with a thick layer of ointment. As a basis for the ointment, mutton-fat seemed to him to be the most useful. This muslin ointment, when closely applied and bound on the skin, secures, in Unna's words, "absolute rest to the integument, prevents rubbing by clothes, and excludes the atmospheric air." These muslin ointments are prepared spread on one or both sides of the muslin, and consist of a large variety—amongst them being representatives of nearly all the ointments that are in use in the treatment of skin diseases. To their great utility, Dr. Thin strongly testifies.

As, so far as he knows, muslin ointments are at present only made in Hamburg, and patients cannot get them without incurring delay and trouble, he has not prescribed them in many cases in which he should have otherwise done so. In cases, however, in which the expected benefit from ordinary ointments was not derived, he has found the muslin ointments, supplied by Beiersdorf, successful. For example, in the case of a young boy who was afflicted with frequent outbreaks of papular and pustular eczema over large portions of the body, necessitating the frequent use of soothing ointments, the difficulty of keeping zinc ointment properly in contact with so large an extent of surface, in the active and restless patient, was found to be a great drawback, and the result of the treatment was consequently unsatisfactory. He thought of Beiersdorf's muslin-zinc-ointment, and its application was not only found simple and convenient by his nurse, but healed the eczematous eruption much more rapidly than had been the case when ordinary zinc ointment had been applied in the usual way. This better result was no doubt due simply to the fact that the muslin ointment afforded a more complete covering to the skin than zinc ointment did when it was spread on lint or linen by the nurse. The physical consistence of these muslin ointments surpasses in applicability that of any ointment spread for the occasion on cloth.

THE APPLICATION OF COCAINE TO DISEASES OF THE EAR AND NOSE.—PROF. ZAUFAL, at a late meeting of the Verein Deutscher Aerzte, in Prag, reported the results which he had obtained from the use of three and five per cent. solutions of cocaine for anæsthetic purposes. Applied to the walls of the nose, it exercises a prompt anæsthetic effect.

In chronic nasal catarrh, he was able to operate with the galvano-cautery without pain to the patient. In the application of cocaine to adenoid vegetations of the nasopharyngeal cavity, favorable results are also anticipated, and likewise for the anæsthesia of the external auditory canal. It was observed that the epidermis and underlying adipose tissue of the canal impeded the action of the cocaine. True anæsthesia of the tympanic membrane was produced, and in two cases granulations of the middle ear were removed without pain.

PROF. GANGHOFNER reported success with a fifteen to twenty per cent. solution of cocaine in intralaryngeal spasm.

PROF. KAHLER likewise obtained from its use good results in a hysterical woman suffering with vomiting of pregnancy.—*Wiener Med. Presse*, Nov. 30, 1884.

RESORCINE IN INTERMITTENT FEVERS.—In an elaborate memoir upon this drug, DR. VITTORIO GASPARETTI presents the following conclusions:

In twenty-five cases of intermittent fever of various types, twenty-three were cured, and two benefited. It does not always at once prevent the attacks, but in a short time they cease to appear under its administration. The spleen does not appear to be affected by the drug. Disturbances of innervation, which sometimes occur, are rare, except in toxic doses. In these cases, no bad effects worthy of notice were observed.

Resorcine is eliminated by the kidneys, but does not disturb their function. Its beneficial action is more pronounced in the quotidian and tertian types, less decided in the quartan. In this form, it frequently fails to produce results. It satisfactorily replaces quinia in action, cost, and taste, and is very acceptable to children, and is valuable as an anti-ferment in catarrh of the digestive tract. Its average per cent. of cures is greater than that of any other antiperiodic. Its action is very prompt, owing to its rapid absorption.

Gilberti observed that a single dose which reduced the temperature 3.7° F., when given in divided doses at intervals of ten or fifteen minutes, produced changes of only a few tenths of a degree. The dose for an adult is thirty grains in an ounce of water, to be taken in divided doses in one hour, and about an hour previous to the time the fever is expected. A large, is no more efficacious than a moderate dose. Whether the hæmoglobin is increased by its use has not yet been determined.—*Gazetta Medica di Torino*, Dec. 15, 1884.

DIAGNOSIS OF GASTRIC DISEASE.—Methods have been adopted from time to time with a view of determining the digestive activity of the gastric juice outside the body. Van der Velden elaborated a method for carrying out this plan by getting patients to swallow a dry sponge enveloped in a gelatinized capsule. Leube used

to wash out the stomach with about 300 cubic centimetres of iced water. Recently M. Beaumetz has adopted the principle of aspiration in order to obtain some gastric juice. There appears to be no need for the practical physician to acquaint himself with the details of the procedure nor with the minutiæ of the apparatus concerned. Van der Velden said that in cancer of the stomach the secretion from this organ contained no hydrochloric acid, and thus believed that an easy way was open for us to distinguish between cancer and other chronic gastric disorders. Leube concluded that the degree of acidity of the gastric juice would give us some idea of the degree of the dyspepsia, and he drew no other conclusion from his careful study of the subject. A certain coloring matter derived from coal tar, and known as orange-poirier No. 4 or tropeoline, undergoes a change to a clear violet-red tint when a one per cent. solution is brought in contact with muriatic acid, whilst it does not lose the yellow tint with lactic and other acids. This tropeoline has been employed in testing the condition of the gastric juice. The above information is interesting, but as yet cannot be said to possess any value for clinical medicine.—*Lancet*, December 13, 1884.

NEW INTERPRETATION OF THE MENSTRUAL PROCESS.—LOEWENTHAL, in an article upon this subject which appears in the *Arch. f. Gyn.*, xxiv., 1884, cites the different opinions of authors upon the relations which exist between ovulation and the menstrual flux, and gives a complete résumé of our knowledge on this subject.

According to Loewenthal, the periodic flow occurring in menstruation is not due to the rupture of the Graafian follicle, although the two phenomena, for the most part, coincide. The hemorrhage is due to an elimination from, or contraction of, the mucous membrane, which at this period is considerably thickened. This menstrual change is caused by the presence of an ovule previously expelled from the ovary.

If the ovule is fecundated, the changes result in phenomena of the sickness of pregnancy. Coincidence between the rupture of the follicle and the menstrual flow does not necessarily exist. They may be separately produced, the rupture of a follicle taking place without change in the uterine mucous membrane and flow of blood. The periodicity of the appearance of the menses is in relation with the non-fecundated ovum lodged in the uterine mucous membrane. The differences observed in this periodicity are due to various causes, specific or general, which influence the vitality of the ovum.

Fecundation usually takes place in the uterus, rarely elsewhere. A fecundated ovum is expelled from the ovary, usually soon after a menstrual period.—*Gazette Médical de Paris*, Dec. 20, 1884.

A CASE OF VAGINISMUS TREATED WITH HYDROCHLORATE OF COCAINE.—DUJARDIN BEAUMETZ reports, in the *Bull. Gén. de Thérap.*, Dec. 15, 1884, a case of vaginismus treated with hydrochlorate of cocaine with good effect. The patient was married, and showed no signs of hysteria. At first during conjugal intercourse no pain was experienced. Some years subsequently she gave birth to a child after tedious labor. A few months after convalescence sexual intercourse became extremely painful, and for two years was impossible. Examination revealed the fact that extreme pain resulted from digital touch, and a contractile band within the vagina resisted the introduction of the finger. Forcible dilatation under chloroform failed to produce good results, as likewise did mild dilatation by the bivalve speculum. Finally hydrochlorate of cocaine was applied in two per cent. solution to the labia minora and orifice of the vagina. Within a minute sensibility disappeared, and the speculum was introduced without pain.

Two days subsequently the speculum was introduced without previous application of the cocaine, and produced but slight pain. After four applications of the anæsthetic, pain on introducing the speculum was almost entirely absent, and the band which constricted the vagina had disappeared.

BEAUMETZ pronounces, as the result of numerous observations, cocaine hydrochlorate to be also the best therapeutic agent in vaginismus due to inflammation and ulceration of the vulvar orifice.

OPERATIVE TREATMENT OF PRURITUS VULVÆ.—SCHRÖDER maintains that in cases of pruritus vulvæ which have long resisted treatment, operative interference is necessary, and in the cases which he cites benefit has never failed to result from it. The condition which indicates the operation is—pruritus upon circumscribed, contracted spots, which project above the level of the skin, and are of a whitish color. The operation consists in excising the tissues as far as the diseased condition extends and bringing the sound parts into apposition. This procedure is rarely required, four cases only having so far been met.

In a condition analogous to that already described, existing in unmarried women, there was a remarkable degeneration of the skin surrounding the anus, simulating but not identical with pruritus. In this case an annular excision of the skin around the whole circumference of the anus was made. It was at first thought a cure had been effected, but later the disease returned. —*Centralbl. für Gynakol.*, Dec. 13, 1884.

BACTERIA IN ULCERATIVE ENDOCARDITIS.—M. CORNIL, in the *Journ. des Connaiss. Méd.*, Dec. 22, 1884, discussing the origin of these bacteria, holds that in the various febrile diseases, puerperal fever, pyæmia, septicæmia, and in traumatic inflammations, the lymphatic cells or white blood-corpuscles contain these bacteria under the form of cocci, isolated or in chains. These cells are carried in the blood current throughout the system and are deposited at various points, among which are the valves of the heart, which, by reason of their alternate contraction and relaxation, are favorite seats of deposit. Thus ulcerative endocarditis is produced in erysipelas and pneumonia.

Koster, however, believes that the microbes reach the valves through their nutrient capillaries.

In the opinion of Cornil, this view is untenable, inasmuch as the bacilli are found only on the surface, not in the tissue of the valves, which would be the result if they were deposited by the nutrient capillary vessels.—*L'Abeille Médical*, Dec. 22, 1884.

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IS TUBERCULOSIS PRODUCED BY THE INOCULATION OF INDIFFERENT SUBSTANCES?

THE publication in 1866 of the results of Villeman's experiments upon the inoculation of tuberculosis, was soon followed by the enunciation of the doctrine that tubercle can also be produced by the inoculation of indifferent substances, such as inspissated pus, dried blood, fragments of cheese, particles of glass—in fact, indifferent substances of any kind. The supporters of this doctrine included at one time some of the most authoritative names in pathology, notably Cohnheim, Waldenburg, Burdon-Sanderson, and Wilson Fox. Cohnheim was the first to leave the ranks. In repeating his experiments, he arrived at different results, and concluded that tubercle could only be produced by the inoculation of true tubercle. The change of view of such a well-known and skilful experimenter naturally carried with it many who were satisfied to pin their faith upon his opinion. Then followed the very careful experiments of Koch, who insisted that not only must the material be tubercular, but that the inoculation to be successful must contain the tubercle bacillus. These researches caused Wilson Fox to repeat his experiments, and the negative results he obtained led him also to renounce his original views. Thus another strong prop was withdrawn.

We have more than once called attention to the importance of this question as bearing upon the infectious nature of tuberculosis, and especially its origin in a fungus. Granted that indifferent substances, like powdered glass and ultramarine blue, may produce tuberculosis by their inoculation, the bacillus tuberculosis may be classified among such substances, and produce the disease in the same manner. If, on the other hand, it be shown that the inoculation of indifferent material is incapable of producing tuberculosis, the only remaining obstacle to the acceptance of the parasitic origin of tubercular phthisis is removed.

The announcement, therefore, of the results of the carefully conducted experiments of DR. STERNBERG, in *The American Journal of the Medical Sciences* for January, 1885, is an important one in this connection. The experiments consisted in the injection of ultramarine blue into the peritoneal cavities of two rabbits, and of powdered glass into those of two others. The injections were made in the laboratory of the Johns Hopkins University at Baltimore, with material furnished by Dr. Formad, of Philadelphia, who was present, and who determined also the quantities to be used. In the afternoon of the same day, in the country eight miles from Baltimore, eight more rabbits were similarly injected, four with blue and four with glass. The rabbits operated upon in the city were placed in an apartment adjoining another in which were rabbits inoculated with sputum containing the tubercle bacillus, the object being to test the question whether association with tubercular animals would make a difference in the result.

One of the four rabbits operated upon at the laboratory was evidently in poor health, and died the next day. Another died four days later, probably from injury to the intestine during the operation. Another of the laboratory rabbits died twenty-eight days later, and at the autopsy Dr. Councilman found the blue pigment, in large quantity, in the cavity of the abdomen, free and encapsuled, and in the lymphatic vessels of the diaphragm in such quantity as to give them the appearance of having been artificially injected. One rabbit injected with the blue died in the country nine days after the operation, and one injected with glass thirty-six days after being operated on. Of the remainder, two were killed forty-one days after being operated upon, one having been injected with the blue pigment, and one with glass. Neither of these presented any evidences of tuberculosis, and the others were allowed to live a month longer.

All the animals were examined after death by Dr. Councilman, of Baltimore, who found that the pathological changes differed somewhat in those injected with blue and in those injected with glass, the evidences of local inflammation being more decided and adhesions more numerous in the latter. Numerous nodules were found in both, varying in size from the head of a pin to that of a bean, being pigmented in the case of the blue, and pure white in that of the glass. They were found upon the peritoneal surface and on the liver. The nodules in the case of the glass injections most closely resembled tubercles.

They were of a whitish color, and on section a soft mass could be squeezed out of them which could be easily crushed between the fingers, and on a superficial microscopic examination might have been taken for a caseous mass. But more careful microscopic examination set all doubts at rest. The large nodules were composed of masses of glass enclosed in vascular connective tissue, which also penetrated between the glass, dividing it into small areas. The smaller nodules were found where only a small amount of glass was present. But a few cells were found commingled with the glass, and sometimes a slight nuclear increase was found around one or two bits of glass, at others the glass was enclosed in a small mass of connective tissue very rich in cells. At no place was any glass taken up in the tissue or lymphatics, in striking contrast to what was found where the blue injection was used. In no instance was any true caseation found, and there were no nodules which had even the anatomical structure of tubercles—the so-called pseudo-tubercles.

The rabbits which had been injected with tuberculous sputum in the course of the experiments, were examined, and typical tuberculosis was found to have been produced in two. There was a large caseous mass at the point of injection, the axillary glands were caseous, and there were innumerable caseous nodules on the lungs, liver, and elsewhere. In one there was no caseation at the point of injection, nor were the lymphatic glands affected, but the lungs contained numerous grayish, transparent nodules, some single and some conglomerate. Tubercle bacilli were found in every instance, in the nodules in the internal organs, the caseous mass at the point of injection, and in the cheesy lymphatic glands.

These observations appear to us the most important yet published in this country, and go a great way towards confirming Koch's doctrine.

Dr. Sternberg also published in the same article a letter from Dr. James E. Reeves, of Wheeling, W. Va., describing the clinical history and macroscopic post-mortem appearances in the so-called "nailers' consumption." In consequence of the late date at which Dr. Reeves's letter was received it was impossible for Dr. Sternberg to give the subject much consideration, but we hope he has not dismissed it finally with the statement that it "is evidently not tubercular." For although Dr. Sternberg's experiments tend to weaken much the grounds of the belief which has been very general until lately, at least, that "nailers' consumption" is a variety of phthisis pulmonalis, they do unquestionably present a clinical history which is that of many cases of true tubercular phthisis, and the importance of the subject demands a closer minute investigation. It is true that Dr. Reeves, who is very successful in demonstrating tubercle bacilli, failed to find any in the sputum of a large number of these cases which he examined, but to say that they are not tubercular for this reason is, as yet, begging the question. There were fibrous (?) nodules, dilated bronchi, and enlarged glands which should be carefully studied before a conclusion is reached. "Now and then," says Dr. Reeves, "a case is met with in which the lungs are the seat of tuberculosis; but in such instances, I doubt not, the family history, if questioned, will show tuberculous tendency."

This class of cases, including the phthisis of grindstone workers, steel grinders, file makers, and miners, has not yet been thoroughly studied. Science is exacting, and many still believe these forms to be tubercular, and will continue so to believe, until exact methods are brought to bear to remove all grounds of such belief.

EXTIRPATION OF THE BLADDER FOR SARCOMA.

DURING the past two years several papers have appeared in the German medical journals in which, through experiments upon dogs, it was shown that the urinary bladder might be successfully removed. As the natural sequence of these vivisections, we have now to record the extension of the operation to the human subject by SONNENBURG, of Berlin, which is fully described in the *Berliner klinische Wochenschrift*, No. 52, 1884.

The patient was a woman, 60 years of age, on the anterior wall of whose bladder digital exploration disclosed what appeared to be a circumscribed, non-ulcerated carcinoma. As the suffering was great, and as she was losing much blood, it was determined to remove the tumor along with the adjacent tissues of the bladder, and close the wound with sutures. The organ having been opened as in epicystotomy, it was discovered that the limits of the neoplasm were not sharply circumscribed, so that for its complete removal the entire viscus, except a small portion of its posterior wall, the trigone with the openings of the ureters, and the sphincter, was excised. During the operation the peritoneal cavity was freely opened, but the edges of the wound in that membrane were carefully brought together with sutures. Drainage-tubes were brought through the urethra and the abdominal incision, thereby providing for the thorough escape of the urine and the secretions of the wound, and, at the expiration of three weeks, the patient was progressing satisfactorily, the wound was granulating nicely, and there was every prospect of ultimate recovery.

The case thus briefly recorded shows that the greater portion of the urinary bladder may be extirpated with a fair prospect of temporary success. In view, however, of the probable recurrence of the disease, and of the immediate risks to which the aged patient was subjected, we cannot congratulate

the operator upon his daring performance—a performance which may, in the opinion of some surgeons, redound to his credit, but which we regard as being utterly unjustifiable. There is a limit to operative procedures in malignant disease, and surely the limit was reached in this case, the infiltration of the walls of the bladder having progressed to an extent which should have suggested the establishment of a vesico-vaginal fistula, to provide for the free escape of urine, and thereby to do away with the periodical filling and emptying of the bladder, rather than the harsh procedure to which Sonnenburg resorted. Colpocystotomy and the formation of a permanent fistule would certainly have mitigated the suffering and arrested, partially, at least, the bleeding. To fulfil these indications should have been the aim of operative interference; to have extirpated nearly the entire bladder was as useless as it was unsurgical.

REMOVAL OF A BRAIN TUMOR.

FERRIER'S forecast, made about a year ago, that the doctrine of cerebral localization would in the future have an extensive surgical application, has been fulfilled in a recent case at the Hospital for Epilepsy and Paralysis, London. A man, aged 25, consulted Dr. Hughes Bennett for paralysis of the left arm. Four years previous he had received a blow on the left side of the head. A year after, twitching began in the tongue and left side of the face, which soon became worse, occurred paroxysmally, and he had "fits," general convulsions, and loss of consciousness. Ultimately, the arm became quite useless for finger and wrist movements; the left leg also began to get weak. There was double optic neuritis. A diagnosis was made of tumor of the cortex involving the centre of the hand, and irritating the face and leg centres. Dr. Bennett suggested its removal. On November 15th this was done by Mr. Godlee, of University College, who trephined over the upper part of the fissure of Rolando. When the cortex was exposed, no tumor could be seen, but the ascending frontal convolution was distended. An incision was made into it, and at a quarter of an inch below the surface a hard glioma the size of a walnut was found and removed. Twenty days after the operation the condition of the patient was most satisfactory; the vomiting, pains, and convulsions had ceased, but there was a tendency to hernia of the brain substance and paresis of the leg had increased. On the morning of December 16, more unfavorable symptoms set in, rigor, fever, sickness, and pain in the head, and the hernia of brain-substance increased. He gradually sank and died on the 23d, consciousness remaining until the end. The post-mortem showed death to have been due to meningitis.

It is a matter for general regret that this case, in which medical and surgical skill were so conspicuously displayed, did not reach a successful termination. Still, we should not be discouraged. It illustrates, however, the dangers of cerebral surgery in man, and shows the difference between the Simian and human brain as regards the freedom from reaction after operative measures. Ferrier and others speak of "the unfailing safety, the freedom from all untoward results," in the case of the former, but there are grave risks to be incurred in the latter. If success is to be obtained, it is just in these cases of Jacksonian epilepsy that we may expect good results, for the localization can be made with tolerable accuracy, and the lesions are often limited. The case reported by Dr. Osler in the January number of the *American Journal of the Medical Sciences*, of cortical epilepsy of twelve years' duration, due to a small glioma not larger than an almond, is an instance in which an operation would have been justifiable and possibly have been the means of saving life.

PULMONARY SYPHILIS.

IF we are to credit the clinical reports, syphilis of the lungs is a tolerably common affection; on the other hand, in the post-mortem room it is among the rarest of anatomical lesions, so much so, indeed, that men of large experience have seen but one or two specimens. There is a well-recognized syphilitic pneumonia in the new-born, and in the adult, gummata of large size have been found; but with the exception of these two conditions our knowledge of pulmonary syphilis is extremely limited. Areas of fibroid induration about the hilus or beneath the pleura are supposed by many to be syphilitic, and may be in some cases, but they occur also in persons without any specific taint. Grandidier states that the affection is most common in the middle lobe of the right lung; Pancritus, that the parts about the hilus are most often involved. The process is confined to the interstitial tissue, and is at first a small-celled growth, which is gradually converted into fibrous tissue and a form of cirrhosis is induced. Caseation may occur with softening and the production of syphilitic phthisis. It does seem probable that some of the cases of cirrhosis of the lung have a syphilitic origin.

What now is the clinical evidence upon which a diagnosis of lung syphilis is usually based? First, the existence of the acquired or inherited disease. This is all important. Second, the beneficial effect of mercury and iodide of potassium. The history and the treatment are deemed sufficient as in the series of cases reported elsewhere in this issue. The history even may be very imperfect; thus as the ten

cases of pulmonary trouble due to inherited syphilis there given, in only one is it stated that there were other signs of the disease such as we can often discover in these subjects, leaving us to conclude that in nine the lungs were alone attacked; that is to say, such an extremely rare tertiary manifestation as pulmonary syphilis occurred in nine instances without, so far as we know from the records, any previous specific symptoms.

The form of cirrhosis of the lung due to syphilis has certain clinical features of some distinctness. Thus, the fever is slight or absent, the central part of the lung, particularly the middle lobe in the right, is most often attacked, and there may be irregular areas of percussion dulness. The cough is usually dry, the sputum small in amount, often bloody, and the specific tubercle bacilli are absent. These cases generally come under observation when antisyphilitic measures are useless for curative purposes.

A possible important diagnostic sign may be afforded in the discovery by Lustgarten, of bacilli peculiar to syphilitic lesions, and following close upon the announcement of this discovery Kœniger, in *Deutsche medicinische Wochenschrift*, narrates briefly six cases of chronic phthisis in which there were no tubercle bacilli, but peculiar forms resembling somewhat those of Lustgarten. In four of these cases there was a well-marked history of syphilis. We may possibly have here a means whereby syphilitic lung affections can be accurately diagnosticated; if so, it will be a great boon. At present the cases are distributed in a curiously irregular way among practitioners, some having had a great number (Pancritus, of Berlin, for example, who had over one hundred cases), others rarely having seen an instance in a long experience, a fact which, taken in connection with the *post hoc* therapeutical deductions, so important an element in the diagnosis, should make us particularly careful in our estimation of reports of pulmonary syphilis.

IS WOMAN WOMB-MAN?

VAN HELMONT is to be credited with the statement: *Propter solum uterum mulier est quod est.* But really he simply threw into a different form an axiom of Hippocrates. The progress of knowledge as to the physiology of the female sexual organs destroyed the force of his assertion as well as that of the axiom of Hippocrates. Chereau, writing in 1844, observed that in place of describing the ovaries and oviducts as appendages of the womb, it is more rational and more philosophic to say that this last viscus is added or annexed to the ovaries or oviducts. Somewhat less than a score of years later, Tilt, probably taking the motto from Chereau, said, "*Propter ovaria sola mulier est quod est.*"

So much for the first statements as to the relative importance, as held at different times, of the organs referred to. But was there a time when our language sought to express in the name given the human female the supposed predominance in her nature of the uterus—in a word, is woman womb-man? This suggestion of the origin of the word woman is quite fanciful and altogether modern. Let any one of critical mind turn to the Wiclif version of the New Testament, 1380, and read that part of the parable of the Prodigal Son where the King James version states "he would fain have filled his belly with the husks the swine did eat," and he will find "his wombe" is used for "his belly." Here was a womb-man, but no one can suppose he was a woman. Womb, or wombe, was used at first for belly, and not for a sexual organ peculiar to the female, while at the same period the word woman was already in use.

To our statement of the incorrect derivation of the word woman from womb, we add the following note as to the true origin of this word from one of the most distinguished and learned philologists in our country, Prof. March, of Easton, Pa.:

"*Woman* is an Anglo-Saxon *wif-man*, like German *weibs-mensch*, Latin *femina-homo*, *wif*-wife, being in Anglo-Saxon, a general word for female, and in this compound a sign of gender, in contrast with *waepen*, membrum virile, whence Anglo-Saxon *waep-man*, Latin *mas-homo; wifman* and *wepman*, for *woman* and *man* were in use almost to Chaucer's time; *wifman* changed to *wimman*, then to *wumman; woman* is a comparatively modern spelling, disguising both the etymology and pronunciation, as so much of our beloved modern spelling does."

FATTY INJECTIONS IN SALIVARY FISTULA.

IN the *Abeille Médicale*, No. 51, 1884, M. MOLLIÈRE, of Lyons, reports a case of salivary fistula cured by a novel procedure.

At the age of six years, when suffering from measles, a painful swelling appeared beneath the ear of a girl, which was incised, and gave vent to saliva, the flow being increased during mastication and by stimulating articles of food. Ten years subsequently, an unsuccessful attempt was made to close the opening by a plastic operation; and, a year later, when the patient came under the charge of Mollière, there was a small opening below and in front of the lobule of the ear, which communicated with a small duct given off by one of the lobules of the parotid gland.

Acting upon an experiment of Claude Bernard, who succeeded in destroying the secretory elements of the pancreas by injecting an oleaginous substance into the canal of Wirsungius, Mollière threw into the fistula about eight drops of carbolized oil, with-

out any apparent effect. Upon repeating the operation, however, six weeks subsequently, the affected lobule atrophied, and the fistula closed spontaneously.

As the parotid gland is not essential to life, Mollière recommends a resort to fatty injections in all cases of salivary fistulæ of the duct of Steno which have proved rebellious to other measures.

SOCIETY PROCEEDINGS.

PHILADELPHIA NEUROLOGICAL SOCIETY.

Stated Meeting, December 22, 1884.

THE VICE-PRESIDENT, CHARLES K. MILLS, M.D., IN THE CHAIR.

DR. MILLS read some

NOTES ON THE TREATMENT OF EPILEPSY.

His remarks applied chiefly to the medicinal treatment of epilepsy proper—grand mal, and petit mal. He did not intend to refer to the treatment of convulsive seizures due to tumors, meningitis, spinal disease, etc.

As to the curability of epilepsy, some apparently authentic cases of cure are on record. After looking over the subject, he could only recall seven cases of apparent or real cure in his own practice, private and hospital. In all of these the attacks remained away for from more than one to more than three years. Gowers mentions a number of cures, cases, at least, in which seizures had not recurred for as much as four, five, six, or seven years. Several of these cases were children. Three of the seven cases alluded to by Dr. Mills were children. All observations as to the cure of epilepsy were necessarily imperfect. After a number of years the attacks recur again. Although, however, the absolute curability of epilepsy might be doubtful, certainly great benefit from treatment is to be derived in most cases. It is a wrong to such patients not to treat them.

He had used the following remedies, singly, three or four times daily, in a series of cases, during the last ten years: Bromide of potassium, grs. x to ʒj; bromide of sodium, grs. x to ʒj; bromide of ammonium, grs. x to ʒss; monobromide of camphor, grs. iij to vj; hydrobromic acid, fʒss to fʒss; iodide of potassium, grs. v to ʒss; biborate of sodium, grs. xv to xx; chloral hydrate, grs. x to xv; oxide of zinc and valerianate of zinc, grs. iij to x; nitrate of silver, gr. ¼ to gr. ½; tincture of belladonna, ♏x to xv, or extract of belladonna, gr. ¼ to gr. ½; extract of cannabis indica, gr. ⅛ to gr. ¼; fluid extract of cocculus indicus, ♏j to iij, or tincture of cocculus indicus, ♏v to x; nitrate of potassium, grs. v to viij. Other remedies which he has only used in combination with some of the above drugs, are as follows: Conium juice, fʒj, or fluid extract, ♏iij to x; tincture of digitalis, ♏v to x; sulphate of strychnia, gr. $\frac{1}{40}$ to $\frac{1}{30}$; Fowler's solution of arsenic, ♏ij to v; fluid extract of ergot, fʒj to fʒij, or extract of ergot (Squibb's), grs. iij to vj; iron, cod-liver oil, and quinine.

The bromides are certainly the best remedies, and the bromide of potassium, in his opinion, stands at the head of the list. The bromide of sodium comes next in efficacy to the bromide of potassium. He thought the bromides affected the nerve centres directly. The mixed bromides are better, usually, than any one of them used singly.

The bromides are advantageously combined with other drugs. The combination which he had found, on the whole, the best for long-continued use, was bromide of potassium, grs. xv; bromide of sodium, grs. xv; solution of the arsenite of potassium (Fowler's solution), ♏ij; conium juice, fʒss, or the fluid extract of conium, ♏iij to v. This was generally made up with syrup of orange and some bitter infusion. Another good combination, mentioned also by Gowers, was the bromide of potassium and tincture of digitalis. It was only especially valuable in cases complicated with weak heart or mitral disease. Monobromide of camphor had no advantage over the bromides. Hydrobromic acid was efficient in very large doses, but so much water had to be given with it that the amount to be swallowed was appalling to the patient. It sometimes irritated the stomach. Borax was not of established value, but helped a few cases temporarily. He found the iodide of potassium, unless especially indicated, had little value when used alone in the treatment of epilepsy. Chloral hydrate is not of much value when given alone, but with the bromides, in cases uncomplicated with cardiac disease, sometimes makes a useful combination. Trousseau's belladonna treatment had been used without noteworthy success. Cannabis indica was not to be depended upon. He had tried cocculus indicus in six cases at the Philadelphia Hospital. None improved, and four were made worse by its use, one of the four becoming insane while taking the drug. At the request of Drs. Reichert and Hinsdale, he had used the nitrate of potassium in seven cases. Of these, only one seemed to be benefited, and some were made worse by its use. When the bromides had to be stopped, the zinc salts or the nitrate of silver were the best substitutes; but they could only be relied on for a short time.

The way to treat epilepsy, in his opinion, was simply to have a plan of treatment, and carry it out over a series of months or years. He would, for instance, first put a patient upon a single bromide, say fifteen grains three times a day, to be increased until a decrease in the number and severity of the paroxysms was produced. He kept him upon this perhaps for a month. He then used the mixed bromides, or some combination of bromides with other drugs, preferably the bromide, arsenic and conium prescription. He watched the condition of the patient, and, if necessary, put him on cod-liver oil, quinine, or iron. With reference to nitrates, bromates, etc., he said that there was probably some chemical or chemico-physiological reason for inefficiency. The *ites* and *ates* would probably *never* give as good result as the *ides*. Mr. Mills believed with Dr. Pepper (*Med. and Surg. Reporter*, January 12, 1884), that close attention should be paid to every point in the daily life of an epileptic—to diet, rest, and hygiene; but he did not, with his present experience, believe that a genuine case of thoroughly developed epilepsy could be cured, or even greatly benefited, without drugs. Harm, however, might be done by over-use of drugs.

Among the surgical and external means of treatment he had successfully used, were, excision of cicatrices, removal of neuroma, actual cautery, and blistering to the neck or head. He said he did not use counter-irritation to the scalp, but was a strong believer in the

actual cautery, used after Brown-Séquard's method, to the nape of the neck.

DR. E. T. REICHERT said that the efficacy of the bromides was certainly not due to the bromine, for bromide of potassium is the best of the bromides, and it contains less bromine than any of the others. The amount of bromine in the chief bromides, as given by Gowers, is as follows:

Bromide of ammonium, . .	81 per cent.
Bromide of potassium, . .	67 per cent.
Bromide of sodium, . . .	77 per cent.
Bromide of lithium, . . .	92 per cent.

All the bromides act alike, but with varying degrees of efficiency. The bromates, nitrites, etc., are not as useful as the bromides. A certain line of similar chemical salts seem to give uniform physiological and therapeutical results.

DR. GUY HINSDALE said that, in regard to the cases in which Dr. Mills used the nitrate of potassium, some four years ago, one was benefited, some remained the same, while others were apparently made worse by its use.

DR. WHARTON SINKLER wished to know if any of the members had used hyoscyamus, and with what results. He said that Althaus, of London, reported cases in which tincture of hyoscyamus had been used successfully, in doses of from one to three drachms. He said that he had reported one case of epilepsy which had been greatly benefited by cannabis indica, after the bromides and other remedies had failed.

DR. H. M. WETHERILL said that, in his experience, the bromide of potassium was the best remedy. He said he had never tried the tincture of hyoscyamus. He had never seen a case of epilepsy entirely recover.

DR. F. DERCUM said that his experience was summed up in the statement that he found the bromides the best.

DR. MORRIS LEWIS spoke of the cure of a child, three years old, at the Episcopal Hospital, in which he could obtain no results with the bromide of potassium. The seizures continued, and were worse, if anything. He then resorted to bromide of ammonium, and with immediate good results.

DR. J. H. LLOYD thought that in cases of epilepsy attention to the digestive functions and to sleep was highly important. He called attention to the observation of Dr. Radcliffe, that epileptics have a tendency to over-eat and to sleep too much. In his own experience, he had found that when constipation was present the seizures were likely to be more frequent and severe. Dr. Radcliffe and other English physiologists seemed to prefer comparatively small doses of the bromides long continued. Dr. Lloyd believed the combination of three bromides with the iodide of potassium to be one of the best in the treatment of epilepsy.

DR. A. J. PARKER believed we could not say that the effect of a drug like bromide of potassium, bromide of sodium, etc., was due either to the bromine, or potassium, or the sodium, etc. Each of these salts is an individual drug, each molecule of which has its own form of motion. Bromine is a substance with its own peculiar molecular condition of motion. Potassium, similarly, has its own motion. Bromide of potassium is the resultant of the two motions. Certain members of the same chemical families, as the bromides, iodides, and chlorides, would seem to go together in therapeutical efficacy, due to similarity of their forms of molecular motion. At any time, we may expect, however, to find wide differences, since our chemical equations simply represent an idea of structure, and tell us nothing concerning the form of molecular movement; and therapeutic effects must certainly depend more on the energy and form of motion than upon any other qualities.

DR. E. T. REICHERT made a few remarks on the use of

HYDROBROMIC ACID AND THE BROMIDES IN SEA-SICKNESS.

He said, while crossing the ocean, he had the opportunity of studying the effect of hydrobromic acid and some of the bromides in sea-sickness. Hydrobromic acid was effectual, but had to be used in such large doses that, owing to the dilution with water necessary, the bulk to be taken was excessive. The bromides were therefore, he thought, to be preferred. Bromide of sodium, in large doses, was effectual in one bad case. He believed that all the bromides were good.

DR. J. M. TAYLOR spoke of the use of

NITRITE OF POTASSIUM IN ANGINA PECTORIS.

In an aggravated case of angina pectoris, he had obtained very good results with nitrite of potassium. The patient had been suffering for over a year with paroxysms of increasing intensity, until death seemed imminent. After giving the nitrite of potassium for four weeks, the patient recovered. Nitrite of amyl was used sparingly to control the paroxysms.

NEW YORK SURGICAL SOCIETY.

Stated Meeting, Dec. 23, 1884.

THE PRESIDENT, ROBERT F. WEIR, M.D., IN THE CHAIR.

DR. GEORGE A. PETERS read a paper entitled

CASES OF EXCISION OF SUPERIOR MAXILLA, WITH REMARKS.

(See page 61.)

DR. J. C. HUTCHISON said that he would like to express his preference for the removal of the upper jaw for necrosis *without external incision*, and referred to the following case which was reported in full in the *American Journal of the Medical Sciences* for January, 1884. The patient was a girl, eighteen years old, who suffered from phosphorous necrosis of the right upper jaw and malar bone. The cheek was well retracted, and an incision made from the location of the central incisor along the centre of the alveolar ridge back to its posterior margin. The jaw was edentulous. The periosteum was separated from the anterior surface of the jaw around to junction with the pterygoid process of the sphenoid bone and upward to the malar bone, which was also now found to be dead. This was likewise denuded of periosteum, as was also the floor of the orbit. An incision was then made down to the bone along the transverse palate suture outward to the alveolar process, and another forwards along the middle suture. The periosteum was now separated from the palatine process of the superior maxilla. The spheno-maxillary fissure was perforated and the broadest part of the malar bone

divided directly opposite to the perforation, by a single cut with Isaac's right-angled forceps. The nasal process of the superior maxilla was divided by the same instrument in an oblique direction from the lower termination of the os nasi to the edge of the orbit, leaving the os unguis and the superior extremity of the nasal process of the superior maxilla undisturbed, in order to preserve the lachrymal sac from injury. One blade of the right-angled forceps was then introduced into the right nostril, and the other into the mouth, and the palatine processes of the superior maxilla were separated as far back as the palate bone, by a single cut, and the disunion of the bones concerned was finally accomplished by separating the upper maxillary from the pterygoid process of the sphenoid bone. The jaw was now grasped with a duck-bill forceps, and with a slight twist the whole of the bone (except the upper end of the nasal process) including the orbital plate was readily removed. The malar bone was removed in fragments with the forceps. The periosteum covering the bones was left intact. The palate bones were uninjured, so that the whole of the soft palate was preserved, supported by the palatine plate of the os palati.

At that time, 1872, he looked up the literature of the subject, and was unable to find any case reported in which the entire upper jaw and malar bone had been removed without external incision; whether it had been done since that date he was unable to say. He thought that there are many cases of necrosis of the upper jaw in which this operation can be performed, and regarded it as desirable, especially in women. He was unable to say whether or not bone had been reproduced in his case, or, if reproduced, to what extent; but the only deformity apparent in the photograph, which the patient subsequently sent him, was a slight falling of the right lower eyelid.

VAGINAL HYSTERECTOMY FOR CANCER; RECOVERY.

DR. WEIR presented a specimen of a uterus, epitheliomatous in its lower third, which had been removed by him at the New York Hospital by vaginal hysterectomy, under antiseptic precautions, November 10, 1884. The patient, aged 40, had suffered for nearly a year with obscure pains and discharges. After the uterus had been drawn down by ligatures passed through the cervix, the bladder was separated from it by careful dissection with the finger-end and blunt scissors, until the peritoneal cavity was reached, which was opened, and the uterus, which was considerably elongated, seized at its fundus by a hooked retractor, and tilted forwards through the peritoneal wound into the vagina. Three silk ligatures were passed on each side through the broad ligament, which was then divided close to the uterus, and the organ removed by a final cut through the peritoneum of the cul-de-sac. A single suture approximated the edges of the peritoneal opening, and the ligatures were left protruding on each side. The vagina was tamponed with peat bags, dusted over with iodoform, which were retained *in sitû* for some days, when they were removed. A flow of urine per vaginam was then noticed, which persisted. As in one place the muscular coat of the bladder had been invaded in the dissection to free the organ from the uterus, the urine was supposed to come from an opening formed by the giving way of the thin spot, and some anxiety was felt for a time, since it was also recognized that the right broad ligament had been more than usually encroached upon by the ligature in the desire to get well beyond a suspicious thickening felt in this region. It was feared, therefore, that the ureter might have been involved. A later distention of the bladder with milk while the vagina was opened by a speculum showed that the leakage was in the bladder, though the fistula could not be seen. The opening closed spontaneously December 19. The last ligature came away December 15. The patient left the hospital December 23.

COLLEGE OF PHYSICIANS OF PHILADELPHIA.

Stated Meeting, December 3, 1884.

THE PRESIDENT, J. M. DA COSTA, M.D., IN THE CHAIR.

DR. ARTHUR V. MEIGS reported a case of

OCCLUSION OF THE VENA CAVA SUPERIOR, AND A CASE OF HEART TUMOR.

A man, aged 72, was admitted into the Pennsylvania Hospital, September 18, 1883. He was strong and well until the past two years, when he had pain in the lumbar region which has increased in the last three weeks, and he has not slept well. The day of his admission he was standing by the edge of the river, looking at some object upon the water, when suddenly and for the first time in his life, he was seized with vertigo, and fell into the water. When brought to the hospital the following note was made: Skin slightly yellow and tongue furred. Radial arteries are markedly stiffened. Veins on the right side of the abdomen and chest enlarged, the largest being half an inch in diameter; those upon the left are comparatively slightly enlarged. Prominent veins extend also toward the right axilla. Examination of the heart reveals a murmur which precedes the impulse and the carotid beat. There is slight visible impulse in the epigastrium.

Sept. 21.—The cardiac impulse is in the fifth interspace, two inches to the left of the sternum, and is rather feeble; there is somewhat more forcible impulse beneath the lower end of the sternum and some visible throbbing of the abdominal aorta. Percussion one inch to the left of the sternum shows the cardiac dulness to begin in the third interspace, and there is flatness at the fourth rib level. Transverse percussion at the fourth rib level shows dulness, beginning at midsternum and extending to the left about four inches. There is distinct impulse in the second interspace to the left of the sternum, and this appears to precede the apex impulse; there is also impulse in the second right interspace, which also precedes the apex beat. There is dulness on percussion in the first interspace to the right of the sternum and in the third interspace. The percussion resonance at the corresponding areas on the left side is normal. There seems to be impaired resonance upon percussion over the upper part of the sternum. The presystolic murmur at the apex is distinct. At the pulmonary area the sounds are very faint but distinct, and the same is the case at the aortic area. At the ensiform cartilage both sounds are distinct, but the first is rather thumping, and is accompanied by a faint blowing murmur which is synchronous with the beat of the carotid artery. There

is no undue pulsation of the arteries of the neck, and the veins are full but do not pulsate. There is a systolic murmur audible in the carotids which is increased by pressure; this is also distinct in the subclavians. There is marked systolic murmur in the femorals and in the abdominal aorta as low down as the umbilicus. Lung examination shows slightly impaired percussion resonance at the right apex, while the note is full at the left. The respiratory sounds are slightly more feeble at the right than at the left apex. Posteriorly the percussion note is short, but not markedly dull. The respiratory sounds are unusually feeble.

23d.—The radial pulse is delayed. Pressure upon the enlarged veins at the lower third of the sternum causes the portion of them below the spot pressed upon to become less prominent and full, and produces a sensation of fulness over the eyes. The veins in the right iliac region tend to be enlarged.

The treatment consisted at various times of iron, iodide of potassium, and strychnia. During the whole time that he was in the hospital he complained bitterly of vertigo, and finally became very much disheartened, and on the morning of December 12th cut his throat, severing the left external jugular vein. After he had lost a great deal of blood, the vein was ligated and he lingered until December 20th, when he died.

Autopsy.—The venous system was injected. In the left pleural cavity, placed superficially just beneath the membrane was seen the left azygos, about one-half an inch in diameter, situated on the bodies of vertebræ and extending from the arch of the aorta to the attachment of the diaphragm below. The veins of communication between the spinal and intercostal vessels were found unusually large.

In dissecting the neck, numerous large veins (several one-quarter inch in diameter), were found passing behind the trachea, and they served as a communication from the right to the left side. They commenced at about the level of the episternal notch and descended into the thorax passing toward the left, and terminated in the beginning portion of the left innominate or transverse vein. The left innominate vein at this part was very much enlarged, and as the vessel advanced toward the right side to join the vena cava, it was found to be converted into a flattened fibrous cord, and this portion was pretty tightly adherent to the surrounding tissues and the branches from the arch of the aorta lying in contact with it.

A probe passed downwards within the right jugular was stopped by an obstruction at a point where the right innominate vein joined the fibrous cord in which the left innominate terminated. From the posterior wall of the right innominate, the probe entered the mouth of a moderate-sized vessel which passed downwards into the thorax; its termination and communications could not be traced; it was supposed to communicate with the right azygos vein, but this vessel could not be found.

On removing the heart the pericardium was found normal. The heart was large, and its ventricular walls were thicker than normal. The mitral orifice was narrowed at its auricular aspect, but its outlet in the ventricle was of normal size. The anterior segment was rendered rigid by the deposit in it of calcareous matter.

The opening of the inferior vena cava appeared larger than normal, perhaps half as large again. The opening of the superior vena cava was found obliterated. A very fine probe could be forced in about an inch by tearing tissues at the normal site of the cava. It was found, therefore, that the obstruction existing above in the innominate vessels was complete and extended to the auricle.

The aorta and its principal branches were very much diseased. Commencing at the aortic orifice, the whole vessel was somewhat dilated, though not aneurismal, and this condition extended to the abdominal portion. Its walls were thicker than normal and very rigid. In most parts of the tube atheromatous changes with calcareous degeneration had taken place, so that in squeezing the vessel between the fingers, the calcareous deposits cracked under the pressure with a gritty sound.

The cause of the compression and final obliteration of the calibre of the superior vena cava with its branches seemed to be due to the rigidity of the aorta together with condensation of the surrounding connective tissues, probably of inflammatory origin. All the connective tissue around the arch of the aorta and first portion of its principal branches was increased in amount and very dense, and firmly adherent to the under surface of the sternum, as well as posteriorly to the bodies of the vertebræ. It was in this tissue that the obliterated venous trunks were found, and to which the tissue adhered so firmly that it was difficult to separate the two in dissection.

The venous blood from the head, upper extremities, etc., found its way to the heart by means of the greatly enlarged veins lying on and around the spinal column posteriorly, particularly the left azygos, as well as anteriorly through the enlarged internal mammary vessels, and the superficial thoracic and abdominal branches. Most of the blood evidently came downwards to the level of the diaphragm and thence found its way directly into the inferior vena cava. Other portions of the blood descended from the superficial portions of the thorax into the abdominal vessels and thence by the lumbar branches to the abdominal vena cava.

The examination of the brain showed a notable fulness of the vessels of both the external and the internal membranes. Small patches of opacity were found on the arachnoid, along the line of the sulci over the convexity. Some of the convolutions showed in places slight degrees of atrophy, and the furrows between them were widened, and at these parts there had accumulated a small amount of clear subarachnoid fluid.

This case was a rare one, and of more than usual interest for several reasons. In the first place, there were unusual opportunities for studying the conditions, both *ante* and *post-mortem*, and the physical signs were such that the diagnosis was made during life. The enlargement of the veins of the surface led to the suspicion that one of the cavæ was occluded, and it was decided that it must be the cava superior, because when the large external veins were emptied for the space of an inch or two with two fingers, the blood evidently flowed much more rapidly and forcibly downwards when the finger nearest the head was first removed, than it did upwards when the lower finger was first removed, and this was the case as much when the patient lay in bed as when he stood, thus showing that the current in the enlarged external veins was down-

wards. Further reasons for thinking that the return circulation from the head found its way back to the heart partly by the external veins, was that, if they were compressed, there was at once produced visible congestion of the veins of the face and suffusion of the eyes, and a sensation of fulness in the head. The presystolic murmur in the heart was very marked and unmistakable, and at all times present while the patient was under observation, and abundant cause for its presence was found in the calcareous deposit with stiffening and roughness of the anterior flap of the mitral valve. The systolic murmur at the base of the heart and in the arteries was caused by the stiffening and roughness of the aortic valve flaps, and of the thoracic and abdominal aorta. It was suspected during life that the arteries of the brain would be found to be stiff, and this was the case; still it is very likely that the vertigo with which the man suffered, and of which he complained more than of any other symptom, may have been partly due to the obstruction to the return circulation from the brain, caused by the blood having to find its way through much smaller and more tortuous routes than the natural ones, and this view would seem to receive further confirmation from the fact that there were found some flattening and shrinking of the brain convolutions. The cause of the dulness on percussion over the upper part of the right side of the chest anteriorly, and the upper part of the sternum which was so distinctly made out, was not understood during life, but the post mortem showed abundant cause for it in the very great amount of hard fibrous tissue around the ascending aorta and veins in that region, and here apparently was the seat of origin of the whole pathological process. It seems most likely that the changes which finally caused a complete occlusion of the whole of the vena cava superior and the larger portion of both the innominate veins had its origin in a periarteritis which must have begun around the ascending or transverse portion of the aorta. This must have proceeded gradually, with a constant increase and condensation of the tissues around the aorta and veins, until at last there was produced the large amount of hard fibrous tissue which the post-mortem examination showed to exist in that region.

CORRESPONDENCE.

THE THEORY AND PRACTICE OF ANATOMY AT THE ANATOMICAL INSTITUTE OF VIENNA.

To the Editor of THE MEDICAL NEWS.

SIR: It has long been a matter of observation and remark by American physicians studying abroad, that European (both British and Continental) medical students about to take their degree of Doctor of Medicine (or license to practise), have a far better knowledge of anatomy than the same class of Americans. The writer believes this to be an undoubted fact, and due to four causes:

1. The longer time of medical work required for graduation abroad.

2. The graded course of study, allowing greater concentration of work upon one or two subjects at a time.

3. The more severe and practical examinations required for a degree.

4. A different and better way of teaching anatomy than is practised in the United States.

The first three causes mentioned are highly important, but do not by any means account for the result, which is in large measure due to the last.

We will take up the method of teaching anatomy in one well-known school, that of Vienna, as perhaps the most practical of all, and see in what it consists. The distinctive method means chiefly, more dissecting and more demonstrating of human anatomy to students, at their dissections and in separate courses in topographical anatomy. An elementary knowledge of comparative anatomy is required before graduation, which greatly helps to fix the multitude of facts in human anatomy in the memory, and gives an intelligent basis for further study.

The student *must* spend several months in the "annex" to the dissecting-rooms before he begins actual work with the scalpel. This "annex," as it may be called, comprises three rooms, one of which contains a large number of chests, each for certain bones; for example, one for vertebræ, one is full of ribs, one for skulls, another for femurs, etc. The walls are covered with large plain diagrams, and the rest of the room is occupied by tables, on which to put the specimens for study. These bones may be freely used by all students, with the restriction that they shall not be taken from the room or injured. A small number have to be replaced each year.

In an adjoining room are a number of the glycerine-carbolic preparations, for studying the muscles. In these the parts are about of their normal size, and consistence, everything being dissected away, except the bones, ligaments, and muscles. One such preparation, properly made, will stand about six weeks of constant handling by students. In another room are excellent alcoholic specimens of the heart, lungs, stomach, larynx, brain, etc., which may be taken out of their tanks and laid upon zinc trays for examination. To replace these as soon as they are used up, several advanced students are at work most of the time.

Meanwhile, the student attends the regular lectures upon anatomy by the University professor. When he is finally quite familiar with the skeleton, ligaments, muscles, and viscera, and has a good preparatory knowledge of vessels and nerves, he first enters the dissecting-room, has a locker assigned him for his instruments, dons a long black gown which entirely protects his clothes from being soiled, and is given an arm or a leg, separated from the trunk, upon which to commence work. The advantage of having an extremity which one can quietly dissect in one's own time and way, is very great for a beginner.

The dissecting rooms proper are far from ideal in the great essentials of space, light, and ventilation. In 1848, when the medical students took such a prominent part in the Revolution the anatomical institute was destroyed, and the Austrian government has declined to build another up to the present day. Some of the departments will soon be quartered in the splendid new buildings upon the "Ring," but anatomy, as the "fons et origo mali" must abide in the old armories which she now occupies. The rooms for student work are

three, and are on the ground floor. In addition are the injecting room and the prosectorium. In the latter the dissections for the regular lectures are made, and the courses in topographical anatomy given. Upon another side of the hollow square is the museum which contains many fine preparations by Hyrtl, and the able men who preceded or have followed him as professors or prosectors.

In the same building is the amphitheatre, and there are numerous smaller rooms for private work by the faculty, which consists of one professor, an adjunct-professor, a prosector, a demonstrator, and several assistant demonstrators. The rooms for student work are kept very clean. The floors are made of a smooth cement which can be washed every night, when the refuse is also carried away, and the place thoroughly aired. The dissecting tables are covered with zinc, have a raised edge, and slope toward a hole in the centre, from which blood, etc., escapes into a zinc pail beneath.

For student work cadavers or parts are not, as a rule, injected with any preservative solution, and no injection whatever is employed in the earlier dissections, that the students may become accustomed to tracing empty arteries, and not embarrassed by the presence everywhere of distended arterial twigs. The janitor performs such injections as are done with the ordinary wax and resin composition. It is good practice for the advanced student to do this himself, and it can usually be arranged without trouble. I have injected numerous extremities, as well as infants, with the hot injection in use here, and have never been obliged to heat the part in any way, the composition if properly melted, or thinned at the last minute by the addition of a little turpentine, will run to the very tips of the fingers and toes; indeed a small cut is usually made in the thumb or great toe, as the case may be, and all force on the piston stopped as soon as the injection escapes from this incision. The syringe is quickly withdrawn, a plug inserted in the canula, and cold water dashed over the part to solidify the injecting material. The formula for the hot injection is as follows:

℞.—Yellow wax,	1 kilogram.
Resin,	1 kilogram.
Venice turpentine,	2 tablespoonfuls.

Melt the first two, add the turpentine, and then enough cinnibar to color sufficiently. A tablespoonful to a small bowl of melted injection is about the proper amount. Add a little more turpentine when remelting the injection for use.

What finds most favor is the new Teichmann's injection. It was introduced in my first winter in the Anatomical Institute, and two years later it had steadily gained ground. It is used principally for injecting extremities, heads, or parts of the body, and is not so well adapted for an aortic injection. The advantages it possesses over most others is, 1. It is a cold injection; 2. It will run to the finest arterioles, if desirable; 3. A slight alteration in the formula will enable one to use it for veins and lymphatics; 4. It remains flexible for a number of days, and the fine vascular twigs do not break in a prolonged dissection; 5. It is insoluble in alcohol, and can thus be used for spirit preparations. The disadvantages are, 1. That it requires the use of bisulphide of carbon, although when properly made, or used there is little escape of the vapor of this substance; 2. It requires a syringe with a screw piston, and some little experience to get the injection neither too thin nor too thick, and to use enough force without bursting the vessels. The following are the formulæ:

For an entire cadaver:

	Coarse.	Fine.
℞.—Finely powdered and sifted chalk,	1500 gm.	300 gm.
Cinnabar,	300 "	100 "
Linseed (boiled) oil,	300 "	120 "
Bisulphide of carbon,	150 cc.	100–200 cc.

Mix the first three to the consistence of a stiff putty. This may be kept under water several days, if necessary. Rapidly add the carbon bisulphide just before use. The coarse injection should have finally the consistence of thick paint; the finer, about that of molasses.

For an extremity:

	Coarse.	Fine.
℞.—Chalk,	300 gm.	100 gm.
Cinnabar,	60 "	20 "
Linseed oil,	60 "	24 "
Bisulphide of carbon,	30 cc.	20–40 cc.

Blue injection:

℞.—Zinc white,	150 gm.
Ultramarine,	1 "
Linseed oil,	150 "
Bisulphide of carbon,	10–15 cc.

For lymphatics:

℞.—Zinc white,	20 gm.
Linseed oil,	3 "
Bisulphide of carbon,	2 cc.

Great care must always be used to get a fine variety of chalk. The solid ingredients should be very thoroughly mixed with the oil, and the bisulphide of carbon added just before use, under a flue. Plenty of time should be taken in injecting, and the screwing up of the piston suspended as soon as the large vessels become very tense; when they relax a little another turn or two of the piston may be given. A part injected in the afternoon is ready for dissection the next morning. Enough of the bisulphide evaporates to leave the injection quite firm. It is possible that some of the benzole series might be used as a substitute for the bisulphide of carbon, being both cheaper and less offensive to work with. I have tried, without success, to substitute sulphuric ether.

It is very unusual at the Anatomical Institute for anything worse than slight constitutional disturbance and enlarged axillary glands to follow dissecting wounds. If the glands remain enlarged longer than a few days, they are treated by inunction of mercurial ointment over the skin of the axilla. This treatment appears to be very successful. A few drops of fuming hydrochloric acid poured into the palm of one, and immediately rubbed over both hands, is used to destroy the persistent odor adhering to them after dissecting a stale part, and it is more efficient than anything I have used.

Americans who wish to devote all their time to dissecting, can, in some cases, secure a private room in the Institute for that purpose. Material is, as a rule, plentiful, in spite of the large amount used. The dissection of an extremity is expected to be finished in a

week or, at most, ten days. In addition to the regular supply of cadavers of adults, bodies of infants from the foundling hospital are brought to the dissecting-rooms, often at the rate of three to ten a day. They are especially convenient for tracing out nerves.

One of the best features of the Vienna plan of instruction is the course on topographical anatomy. In this course ten or twelve men gather about a table on which a demonstration is held, and the entire body gone over in regions. The students are so near that each one can plainly see, and, if need be, touch the parts as they are shown and described. It is a most effective method of impressing anatomical facts upon the memory. Combined with some reading and persistent dissecting, it leaves little to be desired.

The common plan of holding didactic lectures upon descriptive anatomy, with a cadaver so far away from the students that no one can see anything satisfactorily, is a relic of former times, when dissection was permitted to a few only, and material was very scarce. We believe that the time spent in attending such lectures, apart from what is taught regarding the action of the muscles (and that properly belongs to physiology), is almost wasted. A much better method would be to have a corps of capable demonstrators—one to every ten or twelve students and this in a graded course would not be many—who should give one or more daily demonstrations in anatomy, each to his own division. They might be appointed for terms of three years each; one or more to go out of office each year, and their places to be filled from among recent graduates by competitive demonstrations. The salary of one professor divided among (we will say) four demonstrators, together with the benefit of three years of dissecting and teaching, would insure plenty of good applicants. The short tenure of office and the competition would yield a maximum of good work, while the advantages of a more thorough knowledge of anatomy to surgeons and students, who should teach and be taught, would be widely extended.

WALTER B. PLATT, F.R.C.S. (Eng.).

BALTIMORE, Jan. 10, 1885.

DR. STERNBERG'S VIEW OF THE ACTION OF POTASSIUM PERMANGANATE AS AN ANTISEPTIC.

To the Editor of THE MEDICAL NEWS.

SIR: In your last issue Dr. Sternberg publishes a paper reviewing some of the points discussed by me in a brief memoir on the Permanganate of Potassium, which appeared in THE MEDICAL NEWS for Nov. 22, 1884. I do not reply to this review in a fault-finding spirit. The additional reasons which Dr. Sternberg has advanced, derived as they are from a peculiarly difficult and laborious investigation, which he is carrying on, must be regarded as so much new matter of an illustrative character, contributed to a recondite subject. For these gratuitous labors, as he intimates, an investigator ought, at least, to receive the meed of intellectual appreciation from the medical public. To have his conclusions questioned seems but a poor return for so much purely scientific work undertaken and carried on for the general benefit. Far be it from me to lessen one iot of the respect which should be entertained for Dr. Sternberg's important investigations. But there may be honest differences of opinion in regard to methods and results—when the subject under discussion is still *sub judice*. I wish merely to support my own views on one point. Dr. Sternberg makes a distinction between *antiseptic* and *germicide*, and he holds those to be in error who use them as synonymous terms. I must confess that I am not convinced by Dr. Sternberg's arguments. They yet seem to me to be convertible terms.

A germicide is an agent that kills germs—ferments or organisms.

An antiseptic is an agent that prevents or arrests septic change.

In the present state of the knowledge on this subject, septic metamorphosis is correlative of the growth and multiplication of certain minute organisms. Remove these organisms and prevent the access of others—in other words, *sterilize* the fluid—all change, fermentation, or decomposition is prevented. That is a true antiseptic which inhibits or destroys the septic agent—a minute organism—and, therefore, it is also a germicide.

I need hardly say that the term deodorizer is quite distinct from antiseptic, and they cannot be used in the same sense. But an antiseptic is necessarily a germicide, and a germicide is necessarily an antiseptic so long as the doctrine of Pasteur regarding the agency of minute organisms in all fermentative processes is held.

ROBERTS BARTHOLOW, M.D.

January 12, 1885.

NEWS ITEMS.

NEW YORK.

(*From our Special Correspondent.*)

CENTRALIZATION IN THE HOSPITALS seems to be the order of the day. There is an evident inclination of medical men to devote themselves to one service, and through resignations, the staff at some of the hospitals—the New York and Roosevelt especially—are greatly reduced in number. At the latter all the surgery is in the hands of Dr. Sands and an assistant.

COLLEGE OF PHYSICIANS OF PHILADELPHIA.—At the annual meeting of the College, held on January 7, the following officers were elected for the ensuing year:

President.—J. M. Da Costa, M.D.
Vice-President.—S. Weir Mitchell, M.D.
Secretary.—R. A. Cleemann, M.D.
Treasurer.—Charles S. Wurts, M.D.
Recorder.—J. Ewing Mears, M.D.
Honorary Librarian.—James H. Hutchinson, M.D.
Censors.—Lewis Rodman, M.D., Edward Hartshorne, M.D., William Goodell, M.D., Alfred Stillé, M.D.
Councillors.—For three years, I. Minis Hays, M.D., and Arthur V. Meigs, M.D. For one year, Robert P. Harris, M.D.

UNIVERSITY OF THE CITY OF NEW YORK.—DR. AMBROSE L. RANNEY, Professor of Applied Anatomy in the Post-Graduate Medical School of New York City, has been appointed to fill the Chair of Anatomy in the Medical Department of the University of New York, rendered vacant by the death of Prof. William Darling.

UNIVERSITY OF VERMONT.—At a meeting of the Medical Faculty of the University of Vermont, Dr. Ambrose L. Ranney was unanimously elected to succeed the late Dr. Darling as lecturer on anatomy.

THE EXTENSION OF TUBERCULOSIS.—The Austrian Minister of the Interior, we learn from the *Wiener med. Presse* (December 21, 1884), has called the attention of the infirmaries and larger hospitals of his country to an official circular in which the management of tuberculosis is considered at length. Inasmuch, as it is now the prevailing opinion that tuberculosis is caused by a specific bacillus, phthisis must also be considered an infectious disease, and all precautions are to be exercised concerning it which have hitherto been observed in regard to other infectious diseases.

The hospitals are directed to take into consideration the complete isolation of patients suffering from phthisis and also to employ all other prophylactic measures necessary to prevent the extension of the disease. It is further directed that the results of the observations in relation to this subject be forwarded to the Minister of the Interior.

THE REPORT OF THE ENGLISH CHOLERA COMMISSION.—The following is the text of the preliminary report presented by Drs. E. Klein and Heneage Gibbes to the Surgeon-General and Sanitary Commissioner with the Government of India:

We have the honor to report that the investigations which we have hitherto carried on in Bombay and Calcutta have yielded the following results:

1. The statement of Koch that "comma-bacilli" are present only in the intestines of persons suffering from or dead of cholera is not in accordance with the facts, since "comma-bacilli" occur also in other diseases of the intestines—*e. g.*, epidemic diarrhœa, dysentery, and in intestinal catarrh associated with phthisis.

2. The "comma-bacilli" in acute typical cases of cholera are by no means present in such numbers and with such frequency as to justify Koch's statement that "the ileum contains almost a pure cultivation of comma-bacilli."

3. The "comma-bacilli" are not present in the tissue of the intestine or elsewhere.

4. The "comma-bacilli" in artificial cultivations, carried out by one of us (E. K.), do not behave in any way differently from other putrefactive organisms.

5. Mucous-flakes of the ileum, taken out soon after death from typical acute cholera, contain numerous mucous corpuscles, many of them filled with peculiar minute straight bacilli. The same bacilli occur also outside the mucous corpuscles. They are never missed even when the "comma-bacilli" are.

6. These small bacilli have been cultivated by one of us (E. K.), and they do not behave differently from putrefactive organisms. These small bacilli are not present in the tissues of the intestine or any other tissue.

7. No bacteria of any kind, and no organisms of known form and character, occur in the blood or any other tissue.

8. A good many experiments have been carried out by one of us (E. K.), with the following results: (*a*) Mice, rats, cats, and monkeys were fed with rice-water stools, with vomit, with mucous-flakes of the ileum, fresh and after having been kept for twenty-four to forty-eight hours. The animals remained normal. (*b*) Inoculations with recent and old cultivations of "comma-bacilli," and the small straight bacilli, as well as with mucous-flakes, were made into the subcutaneous tissue, into the peritoneal cavity, into the jugular vein, and into the cavity of the small and large intestine of rabbits, cats, and monkeys; but the animals remained perfectly well and normal.

9. The material which we have had hitherto at our disposal has been very good and abundant, and, as far as the microscopic work goes, we do not think we shall require any more material.

We therefore propose concluding our inquiry by the beginning of December, and hope soon after to return to England.—*Med. Times and Gazette*, Jan. 3, 1885.

OBITUARY RECORD.—PROFESSOR FRANZ CHVOSTEK died in Vienna, on November 16th, in the fiftieth year of his life. He is well known for his valuable contributions to German medical literature. In the event of the reopening of the Josephinum Akademie in Vienna, he was to occupy the Chair of Internal Medicine.

—— PROF. VIERORDT died on the 22d of November, at the age of 67 years, a short time after the resignation of his professorship. His work upon the *Doctrine of the Circulation* entitles him the credit of being the originator of the use of the sphygmograph. Of equal importance were his *Investigations upon the Velocity of the Blood Current*, and the *Physiology of Childhood*.

Vierordt also attained distinction in the domain of mental physiology. His *Elements of the Physiology of Man*, of which several editions appeared, was in its time a most useful book.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM JANUARY 6 TO JANUARY 12, 1885.

HEAD, JNO. F., *Colonel and Surgeon.*—Retired from active service, by operation of law, on January 9, 1885, under provisions of Act of Congress approved June 30, 1882.—*S. O. 7, A. G. O.*, January 9, 1885.

MCKEE, J. C., *Major and Surgeon.*—Ordinary leave of absence still further extended four months on surgeon's certificate of disability.—*S. O. 6, A. G. O.*, January 8, 1885.

SHANNON, WM. C., *Captain and Assistant Surgeon.*—Relieved from duty at Fort Bridger, Wyoming, and assigned as Attending Surgeon at Headquarters Department of the Platte.—*S. O. 2, Department of the Platte*, January 5, 1885.

ROBINSON, S. Q., *Captain and Assistant Surgeon.*—Assigned to temporary duty at Portland, Oregon, from December 17, 1884.—*S. O. 206, Department of Colorado*, December 22, 1884.

WALES, P. G., *First Lieutenant and Assistant Surgeon.*—Relieved from duty at Vancouver Barracks, Wyoming Territory, and ordered to return to his proper station, Fort Cœur d'Alene, Idaho.—*S. O. 204, Department of Colorado*, December 19, 1884.

THE MEDICAL NEWS *will be pleased to receive early intelligence of local events of general medical interest, or of matters which it is desirable to bring to the notice of the profession.*

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